This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

**Usage guidelines**

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

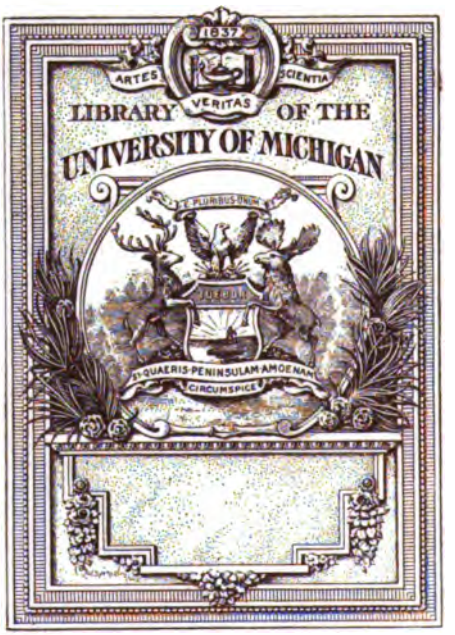
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

**About Google Book Search**

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

B 433465

Digitized by Google




Digitized by Google

S
129.
.A2

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

# TRANSACTIONS

OF THE

WISCONSIN

# State Agricultural Society,

INCLUDING A FULL REPORT OF THE

# State Agricultural Convention,

HELD IN FEBRUARY, 1876,

AND NUMEROUS

PRACTICAL PAPERS AND COMMUNICATIONS.

---

## VOL. XIV, 1875-6.

---

PREPARED BY W. W. FIELD, SECRETARY.

---

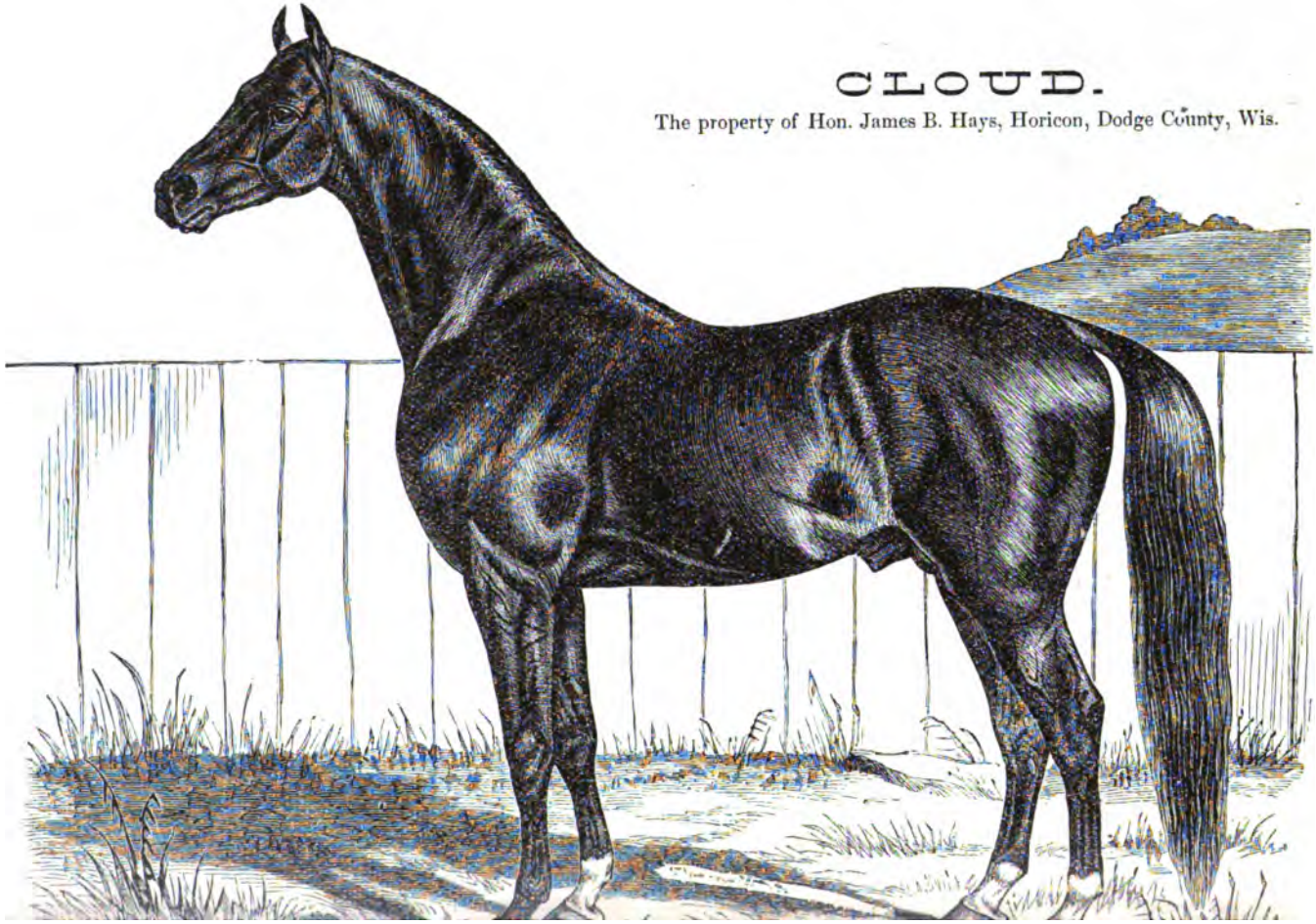
MADISON, WIS.:
E. B. BOLENS, STATE PRINTER.

1876.

Digitized by Google

# CLOUD.

The property of Hon. James B. Hays, Horicon, Dodge County, Wis.



Digitized by Google

# Table of Contents.


| | Page. |
|---|---|
| I.—CONSTITUTION | 9 |
| II.—BY-LAWS | 11 |
| III.—LIFE-MEMBERS | 15 |
| IV.—OFFICERS OF THE SOCIETY | 22 |
| V.—SECRETARY'S ANNUAL REPORT | 23–32 |
| GENERAL REMARKS | 23, 24 |
| Cereal and stock product | 23 |
| The importance of farming upon the compensating plan | 24 |
| Only the best products pay | 24 |
| STATE AGRICULTURAL SOCIETY | 24, 25 |
| What it has done and will strive to do in the future | 24 |
| The farmer no longer in the back-ground, turning the great wheel which moves the world | 24 |
| Generous State aid | 25 |
| INDUSTRIAL SOCIETIES | 25, 26 |
| How they have cheapened goods bought for cash | 25 |
| They have put three millions of farmers to thinking | 26 |
| DAIRY-INTEREST | 26, 27 |
| State boards of trade | 26 |
| Cash system the true one in all departments of farming | 26 |
| Extract from report of secretary of State dairyman's association | 26, 27 |
| WHY FARMING DOESN'T PAY BETTER | 27, 28 |
| Work not done in the right time | 27 |
| Machinery not in condition for use | 27, 28 |
| Bad seed—Poor stock and poorer treatment | 28 |
| Crops when grown, not properly secured | 28 |
| POLITICAL ECONOMY | 28–30 |
| Not an established science, hence may not be perfect | 28, 29 |
| Greenback a great educator | 29 |
| Ex-secretary Chase on the greenback | 29, 30 |
| ONLY A FARMER | 30–32 |
| Intelligence only can cope with intelligence | 30 |
| More brain-labor would elevate this foundation calling | 31 |
| Alarmed, afraid the producers are going to know too much | 31 |
| Think for yourselves | 32 |
| THE PRESS A GREAT PUBLIC EDUCATOR | 32 |
| Its teachings should be based on the principles of justice and right | 32 |
| Laws should be just and equal towards all useful employments | 32 |


Digitized by Google

177483

Page.
VI.—PROCEEDINGS ..... 33–57
EXECUTIVE BOARD MEETINGS ..... 33–44
SOCIETY MEETINGS—Election of officers ..... 44–46
ANNUAL MEETING ..... 46–48
TREASURER'S REPORT ..... 47, 48
WARRANT-ACCOUNT OF SECRETARY ..... 49–57
VII.—EXHIBITION OF 1875 ..... 58
Opening address of President Eli Stilson ..... 58–63
Address of Hon. Geo. W. Cate ..... 64–66
Address of David Ward Wood ..... 66–79
Report of Vice-President, John L. Mitchell, superintendent horse department ..... 80, 81
Report of Vice-President, Geo. E. Bryant superintendent cattle department ..... 81
Report of Vice-President T. C. Dousman, superintendent sheep, swine, and forage departments ..... 82, 83, 93, 94
Report of A. A. Boyce, superintendent poultry department ..... 83, 84
Report of Dr. C. L. Martin, superintendent agricultural department ..... 84–86
Report of G. J. Kellogg, superintendent horticultural department. 86–88
Report of Vice-President R. D. Torrey, superintendent machinery department ..... 88–90
Report of S. D. Carpenter, chairman of special committee on machinery ..... 90–92
Report of Vice-President Satterlee Clark, superintendent manufacturers' department ..... 92, 93
PREMIUMS AWARDED ..... 95–120
VIII.—STATE AGRICULTURAL CONVENTION ..... 121
Brief remarks by President Stilson ..... 121
FINANCE. *By Sidney Myers, Esq.* ..... 121–141
City life affords only time for action, little time for thought. .. 121, 122
Country life the best mills in which to grind truth ..... 122
Convertible currency on a specie basis ..... 123
Science is uncommonly good common sense ..... 124
Different systems of currency ..... 124–126
Make the greenback honest by making it convertible ..... 127
Rule of three introduced into finance ..... 128
English system of finance ..... 129
Causes of financial, commercial, and industrial disasters in this country and England ..... 130, 131
Important propositions, 1–9 ..... 132, 133
All great innovations are at first ridiculed ..... 134
Resumption of a system of suspensions and panics ..... 135–137
Hoarding pumps and air pumps ..... 138, 139
Solution of the problem of the age ..... 140, 141
Delegates etc., in attendance ..... 141, 142
OPENING REMARKS. *By President Stilson* ..... 142–145
Reason why agriculture has made slow progress in the past ..... 142
Agencies which are advancing agriculture to-day ..... 143
Leave your theory at home, and give us facts ..... 144
Compare experiences, and apply science to practical agriculture. 145
Less theories and more practical experience urged ..... 145
Discussion ..... 145–148
THE FARMERS OF WISCONSIN. *By Geo. W. Lee* ..... 149–152
Society advanced as agriculture is developed ..... 149
Vital questions should be discussed in these conventions ..... 149
A nation may be rich, but the masses poor and half-fed ..... 150
Manufacturing, transportation, currency ..... 150, 151
Infamy and fraud visited upon the people under the name of party 152

Digitized by Google

VIII.—STATE AGRICULTURAL CONVENTION—Continued. Page.

BETTER EDUCATION OF FARMERS, ETC. *By J. M. Smith*.... ...152–162
Improvements in the last half century..... 153
Evils looming up which must be met..... 154
More education a necessity that the ballot may be cast intelligently 155
Representatives in Congress..... 157
A nation's prosperity measured by the intelligence of the farmers 157,158
Definition of scientific farming..... 159
Experience in the sale of garden-products..... 159,160
Cultivators vocation the noblest and grandest God ever gave to man..... 161
Be intelligent masters, not slaves—Discussion.....162–168

THE FARMER IN POLITICS. *By Wm. Orledge*..... 169–182
The farmer an independent laborer, hence free to aid in reform. 169,170
Masters of the soil fail to own themselves..... 171
Efforts of farmers reflect little credit upon their ability..... 172
The grange and State Agricultural Society educating agencies..173, 174
Leaders of both parties parasites..... 175
Yield nothing to fraud, but deal with right and justice..... 176
Money earns three times what labor does..... 177
Remedies for grievances must be based upon thought..... 178
Farmers have the welfare of the country in their hands.....179,180
Farmers hold the balance of power and should use it..... 181
Discussion..... 182–187

OUR AGRICULTURAL RAG-BABY. *By E. H. Benton*..... 188–201
The principles of the new system proven sound..... 188
Principles, 1-6—Money a creature of law.....189,190
Objections to a coin-currency .....190–192
Gold basis—3 per cent. gold—97 per cent. confidence..... 192
Banks fail just when they ought to stand..... 194
Coin-currency an engine of mischief to all productive agencies... 195
Characteristics of a perfect currency.....195,196
Practical working of such a currency.....196,197
English consols..... .....197,198
Hindrances to this just greenback currency ..... 199
How to overcome these obstacles.....199–201

GOLD AS A STANDARD OF VALUE. *By Geo. M. Steele, D. D*... 201–210
A standard of value should, as nearly as possible, be invariable... 201
Value is not a quality inherent in an article..... 201
Gold follows the same law to which all other values are subject 202
Regulation by revulsion ..... 203
Interesting tabular statements.....204,206
The value of gold constantly fluctuating..... ..... 206
Price list in California where only a metallic currency is used ...207,228
Greenbacks fourteen to twenty per cent. more purchasing power in New York and Chicago, than has gold in California..... 209
Greenbacks less fluctuating than gold..... 210

A CONSIDERATION OF THE INTERCONVERTABLE-NOTE SCHEME. *By E. B. Leland*.....210–233
Gold the least variable of all known substances..... 211
Volume of currency to be provided by bank issues ..... 212
The greenback only a local and fluctuating value..... 212
What is a circulating note ..... 213
Greenbacks greatly depreciated ..... 214
Hazardous for Congress to control the volume of currency..... 215
Was expansion ever known to lower the rate of interest..... 217
Expansion would produce endless fluctuation of value..... 218
Do not want to measure our dollar by pork or flour..... 220
Solvency of the government unquestioned..... 222
Value of money is in knowing what to do with it..... 225
Surplus of currency of the country..... 226
Lack, not of currency, but of mercantile reliance..... ... 227

Digitized by Google

VIII.—STATE AGRICULTURAL CONVENTION—Continued.

INTERCONVERTIBLE-NOTE SCHEME, ETC.—Continued. Page.
Hardships resumption will inflict ..... 228
English finances ..... 231
No time-bond with a fixed rate of interest can be stable in value .. 232
Something cannot be had for nothing ..... 233
Discussion on the three finance papers ..... 234–249

DOLLARS AND SENSE. *By S. D. Carpenter* ..... 250–265
Dollars have a history and a science ..... 250
Specie currency, none of us or our forefathers have ever seen .... 251
Specie basis likened to the Egyptian pyramid standing on a lady's thimble ..... 252
Basis of banking—confidence 99, coin 1 ..... 253
A national evil, longer to continue the national banks ..... 254
Greenbacks can always be at par ..... 255
Practical history of England and France ..... 258, 259
Business of the country does not require specie resumption ..... 260
Receive store-pay for our bonds ..... 261
Folly of our financial system ..... 262, 263
Mr. Boutwell and Mr. Drew's statements ..... 264
Discussion ..... 265–281

BUTTER-MAKING AND CARE OF COWS. *By F. C. Curtis* ..... 283–290
Butter statistics ..... 283
Test of the quality of milk ..... 284
Nutritious food important—Roots valuable ..... 285, 286
Proper temperature of milk-room necessary ..... 287, 288
Characteristics of cream in churning ..... 288
Whipple's rectangular churn ..... 288
Churning, salting, packing, etc ..... 289, 290
Discussion ..... 290–304

RENOVATION OF SOILS BY ROTATION OF CROPS. *By A. A. Boyce* .. 305–311
Wheat most exhaustive of all the cereals ..... 305
Rotation of plants—Rotation of manures—Summer-fallowing—Corn—Pasture ..... 306–307
Root-crops—Wheat—Wild-oats—Mixed-farming ..... 308, 309
Red-clover the renovating crop of this country ..... 309
Dr. Voelcker's statement ..... 310–311
Discussion ..... 311–319

RELATION OF THE SOIL TO WATER. *By Prof. John Murrish* ... 320–324
Water a universal solvent in the mineral kingdom ..... 320
Plants cannot live upon solid matter ..... 320
Relation of soil to water one of the first questions in agriculture .. 321
Power of the soil to absorb water ..... 322
Porous cellular particles of which the soil is made up ..... 323
Crops suffer from too much water as much as from too little ..... 324
Water and air should have free circulation in the soil ..... 324
Discussion ..... 324–327

A PRACTICAL APPLICATION OF SOME OF THE LESSONS OF THE YEAR. *By C. E. Warner* ..... 328–331
The last year a peculiar one for Wisconsin farmers ..... 328–329
The Deacons experience ..... 329–330
Exclusive wheat culture is ruin ..... 330
Expenses must not exceed our income—Discussion ..... 331–335

WHAT KIND OF WHEAT SHALL WE RAISE? *By J. W. Wood* ..... 336–343
Wheat-growing the overshadowing interest of the State ..... 336
New departure—Patent flour ..... 336
Letter of Wm. P. McLaren ..... 338, 339
Communication from W. J. Langson, Esq., secretary Milwaukee Chamber of Commerce ..... 340–341
Lime in the soil conducive to the growth of hard, flinty wheat ..... 342
Discussion ..... 343–348

Digitized by Google

VIII.—STATE AGRICULTURAL CONVENTION—Continued. Page.

ORIGINAL CREATION OF THE SOIL, ETC. *By H. A. Tenney*.....348–358
Fixed line of the glaciers and the flood..... 349
Nature has written her record in characters not to be mistaken..... 350
When the frozen sea retired, a change of climate came.....350, 351
Period of gigantic mammalia—Mound-builders.....351, 352
Surface of Wisconsin, as to soil, may be divided into three divisions. 353
Wheat-lands of the State belong to the drift-subdivision..... 354
Wisconsin the oldest geological landmark in North America..... 356
We must create new conditions and combinations of fertility..... 357
Artesian wells, marl-beds, peats, etc.—Discussion..... 358–362

RESOLUTIONS..... 362–364
Establishment of an agricultural journal..... 362
Town fire insurance companies..... 362
Resumption of specie payment..... 362, 363
Protest against the repeal of the Potter-law..... 363
Centennial celebration—Postage..... 364
Memorial to extend the scope of the signal-service..... 364
Discussion..... 364–370

WHAT WISCONSIN FARMING DEMANDS OF WISCONSIN SCIENCE. *By Professor T. C. Chamberlin*..... 370, 371
Farmers, if true to certain principles, are true scientists..... 370
Science must aid farming by imparting knowledge..... 370, 371
Reasons why so many boys leave the farm..... 371
Value of the contributions of science in relation to insects..... 371
United States storm-signal service..... 371

HIGHER EDUCATION ON THE PROGRESS OF A STATE, ETC. *By Prof. J. W. Hoyt*.....372–374
Farmers now have an appreciation of science, and are looking to it for help—Advantages of education illustrated.....372, 373
What science has done for industrial pursuits..... 373
Fame of the Michigan University..... 373
An appeal on behalf of the State University of Wisconsin.....373, 374

GRASS IS KING. *By Charles Seymour*..... 374
Postmasters can tell who are good farmers..... 375
Abandonment of grain crops.....375, 376
Nature teaches that mankind are more or less mutually dependent 376
Count the cost of wheat-culture.....377–379
Facts—Reply.....380–383
Advantages of dairy and stock over grain.....383, 384
Grass *vs.* grain in Wisconsin..... 384
James Barclay's estimate of the value of various products..... 385
Vermont and New York dairies.....386–388
Extraordinary results.....388, 389
Sales at eastern factories and dairies..... 390
Western dairy products in disrepute .....390, 391
Apportioning stock to land .....391, 392
Stock raising—Horses .....393, 394
Thorough-breeding, choice of breeds.....395, 396
Opinions of noted men relative to dairy-stock .....396–398
Grass culture for dairy cows .....399, 400
British and French agriculture .....401, 402
Need of more practical information .....402, 403
Skilled, or educated industry.....403–405
Conservatism and prosperity..... 406
Admonitions of history .....406, 407
Discussion .....407–414

SELF CULTURE. *By H. E. Skavlem* .....414–419
What makes an educated farmer..... 414
Education a better safeguard of liberty than a standing army .... 415
If you are willing to work, you can be educated..... 416
Self-culture is the one thing needful ..... 417

Digitized by Google

VIII.—STATE AGRICULTURAL CONVENTION—Continued.

SELF-CULTURE—Continued. Page.
Capacity worthless without application ..... 418
By discussion we arrive at just conclusions ..... 419
Country Gentlemen and Discussion.....420–424

FARM BANKS, OR LITTLE THINGS ON THE FARM, AND WHY SOME SELL OUT AND GO WEST. *By Geo. P. Peffer* .....424–425
Care and economy in small matters, make farmers well-to-do.... 424
Manure-pile, the farmers bank..... 425
Farmers must think and investigate the principles which underlie their business—Discussion.....425–435

SUCCESS, *vs.* FAILURE IN WISCONSIN ORCHARDING. *By J. C. Plumb*.....436–439
Proper location—Varieties.....436, 437
Examples of success.....437, 438
Recommendation—Discussion..... ..... ...439–449
Remarks of Secretary Field..... .....449–451

IX.—COTNTY AGRICULTURAL SOCIETIES.....452, 453

X.—UNIVERSITY-FARM EXPERIMENTS.....454–461

POTATOE-CULTURE. *By H. H. Howlett*.....462, 463
Table showing yield of different varieties.....462, 463

APPLE-TREES. *By G. J. Kellogg*.....463, 464
Table of varieties grown, etc..... 465

REPORT OF FISH COMMISSIONERS, 1875.....466–479

XI.—MISCELLANEOUS PAPERS.

THE MINISTRY OF TOIL. *By Jennie M. Field*.....480–489
How nature works..... 480
Work is a universal and beneficent law of life..... 481
If life means little, it is because little is done..... 482
The best home-makers are those interested in the world's life.... 483
Industry is a life preserver..... 484
Friction, not legitimate work, wears out business men..... 487

HINTS FOR ARRANGING FLOWERS. *By Mrs. H. M. Lewis*.....489–493
Time for cutting—Art of arranging, etc.....490, 491
Flowers for the school-room..... ... 492
A floral service.....492, 493

FLORICULTURE. *By Mrs. M. M. Davis*..... ..... 493–496
What botany means..... 494
Pic-nic in the woods with children, bring them face to face with God in nature..... 495, 496
Flowers of no use to those who cannot appreciate them..... 496

CRANBERRY-CULTURE. *By H. Floyd*..... 496–500
Causes of failures..... 496, 497
Planting, cultivating, insects, etc..... 497
Harvesting—Curing..... 498, 499
A word to cultivators as to varieties..... ..... 500

THE SIBERIAN APPLE. *By J. C. Plumb*.... ..... ..... 500–504
Origin, improvement, and progress..... 501, 502
Promising varieties—Uses..... ..... . 503, 504

Digitized by Google

# Constitution.

## ARTICLE I.

### OF THE NAME AND OBJECT OF THE SOCIETY.

This society shall be known as the "Wisconsin State Agricultural Society." Its object shall be to promote the advancement of agriculture, horticulture, and the mechanical and household arts.

## ARTICLE II.

### OF THE MEMBERS.

The Society shall consist of life-members, who shall pay, on subscribing, twenty dollars, and of honorary and corresponding members, who shall be elected by a two-thirds vote of all the members of the executive board, at any regular meeting. The presidents of county agricultural societies shall be members *ex-officio*, entitled to the same privileges as life-members, and, together, shall be known as the general committee of the Society.

## ARTICLE III.

### OF THE OFFICERS.

The officers of the Society shall consist of a president, one vice-president for each congressional district of the State, a secretary, a treasurer, and seven additional members, who shall hold their respective offices for the term of one year from the first day of January next succeeding the date of their election, and until their successors shall have been elected; and all of whom, together with the ex-president latest in office, and the president and general secretary of the Wisconsin Academy of Sciences, Arts, and Letters, shall constitute the executive board.

## ARTICLE IV.

### OF THE POWERS AND DUTIES OF OFFICERS.

The presidents and vice-presidents shall perform such duties as are common to such officers in like associations, as may be required by the executive board.

The secretary shall keep the minutes of all meetings, and have immediate charge of the books, papers, library, and collections, and other property of the Society. He

Digitized by Google

shall also attend to its correspondence, and prepare and superintend the publication of the annual report of the society, required by law.

The treasurer shall keep the funds of the Society and disburse the same on the order of the president, or a vice-president, countersigned by the secretary, and shall make report of all receipts and expenditures at the regular meeting of the Society in December.

The executive board shall have power to make suitable by-laws to govern the action of the several members thereof. They shall have general charge of all the property and interests of the Society, and make such arrangements for the holding and management of general and special exhibitions as the welfare of the Society and the interests of industry shall seem to require.

The general committee shall be charged with the interests of the Society in the several counties where they respectively reside, and constitute a medium of communication between the executive board and the public at large.

## ARTICLE V.

### OF MEETINGS AND ELECTIONS.

The annual meeting of the Society for the transaction of general business shall be held in its rooms in Madison, on the first Wednesday in December, at three o'clock p. m., in each year, and ten days' notice thereof shall be given by the secretary, in one or more papers printed in the city of Madison.

The election of officers of the Society shall be held each year during and at the general exhibition, and the exact time and place of the election shall be notified by the secretary in the official list of premiums and in all the general programmes of the exhibition.

Special meetings of the Society will be called by order of the executive board, on giving twenty days' notice in at least three newspapers of general circulation in the State, of the time, place, and object of such meeting.

At any and all meetings of the Society, ten members shall constitute a quorum for the transaction of business, though a less number may adjourn from time to time.

## ARTICLE VI.

### OF AMENDMENTS.

This constitution may be amended by a vote of two-thirds of the members attending any annual meeting; all amendments having been first submitted in writing at the previous annual meeting, recorded in the minutes of the proceedings, and read by the secretary in the next succeeding meeting for the election of officers. All amendments proposed shall be subject to amendment by a majority vote at the meeting when presented, but not thereafter.

Digitized by Google

# By-Laws.

## SECTION I.

### OF OFFICERS.

The officers of the society shall, *ex-officio*, fill the corresponding offices in the executive committee.

## SECTION II.

### OF THE DUTIES AND POWERS OF OFFICERS.

*The duties of the President*, in addition to those defined by the Constitution, and the By-Laws regulating the duties of the permanent committees, shall be as follows, to-wit:

1. To inspect the fair-grounds, after they shall have been prepared for the annual exhibition by the special committee of arrangement appointed for that purpose, and suggest such modifications or further preparations as he may deem necessary.

2. To formally open the annual fair of the Society, at such time as the executive committee may prescribe, with an appropriate address.

3. As the executive head of the Society, to have a general supervision and control of the entire exhibition, subject only to the authority of the executive committee.

---

*The duties of the Secretary*, more specifically defined than in the Constitution, shall be as follows:

1. To make a faithful record of each meeting of the executive committee, and keep such record in a condition for the convenient reference of any member thereof, at any time; also to make a record of every order drawn on the treasurer, and delivered to parties in whose favor they were so drawn—separately entering and numbering the orders drawn to pay premiums and those to pay general expenses, and so defining them—and of all moneys due the Society; in all cases holding the parties so indebted responsible therefor until they shall have presented him a certificate from the treasurer, showing that the same has been paid.

2. To open and carry on such correspondence as may be advantageous to the Society or to the common cause of agricultural improvement, not only with individual agriculturists and eminent practical and scientific men of other industrial

Digitized by Google

pursuits, but also with other societies or associations whose objects are kindred to ours, whether in this country or foreign lands, and to preserve a journal of such correspondence in the archives of the Society.

3. To collect and arrange for convenient examination, standard agricultural works and periodical publications, together with such models, machines, and implements as may be donated to, or otherwise acquired by the Society.

4. To investigate, as far as practicable, the nature of fertilizers, indigenous and cultivated plants, insects injurious to vegetation, etc., and to collect and preserve such specimens thereof as will illustrate the natural history and agricultural resources, condition, and progress of the State.

5. To institute and collect reports therefrom, needed experiments relative to the preparation of the various soils of the State for economical culture, the cultivation of different grains, fruits, and garden vegetables, the breeding and raising of stock, etc.

6. To visit, by the advice of the executive committee, or as his own judgment may direct, the various portions of the State, and to give lectures on the science and practice of agriculture, wherever and whenever they may be deemed most necessary or desirable.

7. To co-operate with the Superintendent of Public Instruction and the agent of the Normal-School Board, for the introduction and use in the schools of Wisconsin, of standard works on agriculture and the other industrial arts and sciences.

8. To attend as many as possible of the industrial exhibitions of this country, particularly the county fairs of Wisconsin; to co-operate with the president and special committee of arrangements for the judicious preparation and management of our State exhibition; and to have the sole supervision and control of the office of entry thereat.

9. To carefully prepare and superintend the publication of the Annual Report of the Society to the Governor of the State, embodying therein the proceedings of the State Agricultural Society, an abstract of the reports of the incorporated County Agricultural Societies of the State, and such reports, essays, and addresses, or other matter of information as may be calculated to enhance the value of said report.

Finally, it shall be his duty, not only by the means above named, but also through such other instrumentalities as he may devise, and the committee approve, to devote himself faithfully and unreservedly to the promotion of the industrial interests of the State.

*It shall be the duty of the Treasurer—*

1. To receive primarily and exclusively all moneys due the Society from whatever source.

2. To keep a full and faithful record of all receipts of moneys coming into his hands, and of the sources whence derived, in a book specially furnished by and belonging to the Society, and to have the same open, at all reasonable times, to the inspection of any person or persons authorized by the executive committee to make such examination.

3. To likewise keep an exact record of every order by him paid; and such record must be verified by the proper vouchers, showing that the sums therein named have been by him so paid.

Digitized by Google

## SECTION III.

OF MEETINGS.

*The Executive Committee* shall meet annually, on the day preceding the day on which the annual meeting of the society is held, on Monday preceding the first Tuesday of February, and again on the first day of the annual fair.

They shall also meet at the call of the Secretary, the President, and a Vice-President of the society concurring—and may adjourn to any stated time.

## SECTION IV.

OF A QUORUM.

At any meeting of the Executive Cemmittee, four members thereof shall constitute a quorum for the transaction of business.

## SECTION V.

OF PERMANENT COMMITTEES.

There shall be two permanent committees of the Executive Committee, which shall be respectively styled the *Standing Committee* and the *Finance Committee.*

*The Standing Committee* shall consist of the President, the Secretary, and the Treasurer, who shall have power in the recess of the Executive Committee to draw orders on the treasury for all necessary current incidental expenses. But the Executive Committee shall have authority, and are hereby required to revise the proceedings or transactions of said Standing Committee, and endorse or disprove of the same.

*The Finance Committee* shall consist of the President and Treasurer, and it shall be their duty to suggest means for increasing the revenues of the Society.

They shall also have authority to invest any portion of the funds of the Society that may from time to time be set apart, by the Executive Committee, for investment, disposing of such funds upon such terms and conditions as may be prescribed by the said Executive Committee.

Each of the above named sub-committees shall be responsible for the faithful discharge of their duties to the Executive Committee, to whom an appeal may at any time be taken from their acts or decisions.

The auditing, adjusting, allowing, or rejecting of all bills, claims, or demands, of whatsoever nature, against the Society, and the issuing of orders upon the Treasurer for the payment of the same—except for the current, incidental expenses of the Society, as by this section already provided for—shall devolve upon the Executive Committee; and it shall be the duty of said Committee to annually examine the books, papers, and vouchers of the Treasurer and Secretary, and compare the same, and adjust the accounts between those officers and the Society, and to report thereon at the annual meeting in December.

Digitized by Google

## SECTION VI.

### OF THE ORDER OF BUSINESS.

The following order of business shall be observed at all the meetings of the Executive Committee:

1. Reading the minutes of the preceding meeting.
2. Reading the minutes and reports of the Standing Committee.
3. Reading the minutes and reports of the Finance Committee.
4. Report of Auditing Committee.
5. Report from Special Committees.
6. Communications from the Secretary.
7. Communications from Members of the Committee.
8. Unfinished business.
9. Miscellaneous business.

This order of business may be suspended, however, at any time, by a vote of the majority of the members present.

## SECTION VII.

### OF THE FISCAL YEAR.

The fiscal year of this Society shall commence on the first Wednesday of December in each year, and all annual reports of the year previous shall be made up to that time.

## SECTION VIII.

### OF THE EXPIRATION OF THE TERMS OF OFFICE.

The terms of office of all the officers of the Society shall expire on the 31st day of December, in each year.

## SECTION IX.

### OF AMENDMENTS.

These By-Laws may be amended at any regular meeting of the Executive Committee by a vote of eight of the members thereof.

Digitized by Google

# Life-Members.

| Names. | Residence. | Names. | Residence. |
|---|---|---|---|
| Adams, James..... | Janesville. | Bliss, C. M..... | Iowa. |
| Adams, Isaac..... | Cottage Grove. | Bostwick, J. M..... | Janesville. |
| Adams, L. L..... | Stoners Prairie. | Botswick, R. M..... | Janesville. |
| Alexander, O..... | Milwaukee. | Bonnell, James..... | Milwaukee. |
| Allen, J. W..... | Janesville. | Bonnell, Lansing.... | Milwaukee. |
| Allen, W. C..... | Delavan. | Boorse, Henry..... | Granville. |
| Allen, H. M..... | Evansville. | Boyce, A. A..... | Lodi. |
| Allis, Edward P..... | Milwaukee. | Boyd, R. B ..... | Milwaukee. |
| Angel, R. R..... | Janesville. | Bowen, J. B..... | Madison. |
| Angel, W. H..... | Sun Prairie. | Bowman, J. M ..... | Madison. |
| Atkins, Albert R .... | Milwaukee. | Bradley, C. T..... | Milwaukee. |
| Atwood, Charles D... | Madison. | Braley, A. B ..... | Madison. |
| Atwood, David ..... | Madison. | Brazea, Benj ..... | Wauwatosa. |
| Atwood, Wm. T..... | San Francisco. | Briggs, F..... | Buffalo, N. Y. |
| Atwood, R. J. ..... | Madison. | Brockway, E. P..... | Ripon. |
| Armour, P. D..... | Milwaukee. | Brodhead, E. H .... | Milwaukee. |
| Armstrong, L. G .... | Boscobel. | Brown, Jas. J..... | Madison. |
| Arnold, I. M..... | Milwaukee. | Brown, J. A..... | Milwaukee. |
| Aspinwall, D. M..... | Farmington. | Brown, T..... | Madison. |
| Ayres, J. W ..... | Kenosha. | Bruce, A. T..... | Milwaukee. |
| | | Bryan, John ..... | Cross Plains. |
| Babbitt, Clinton..... | Beloit. | Bryant, D. D..... | Madison. |
| Babbitt, D. H ..... | Janesville. | Bryant, G. E..... | Madison. |
| Bacon, J. P..... | Westport. | Bull, Stephen ..... | Racine. |
| Bacon, W. D..... | Waukesha. | Bullard, Jas..... | Evansville. |
| Bailey, A. P..... | Oshkosh. | Bump, N. P..... | Janesville. |
| Bailey, M. T ..... | Madison. | Bunker, Geo ..... | Madison. |
| Baker, Rob't H..... | Racine. | Burgess, J. M..... | Janesville. |
| Barlass, Andrew..... | Emerald Grove. | Bush, Samuel..... | Milwaukee. |
| Barlass, David ..... | Emerald Grove. | Button, Henry H ... | Milwaukee. |
| Barns, George..... | Janesville. | Burnham, Miles .... | Danville. |
| Barrows, E. S..... | Chicago. | Burnham, A., Jr... | Milwaukee. |
| Barry, James..... | Fitchburg. | Burnham, J. L..... | Milwaukee. |
| Bates A. C..... | Janesville. | Byrne, John A ..... | Madison. |
| Beecroft, W. G..... | Madison. | | |
| Bement, E..... | Oregon. | Casar, Wm..... | Janesville. |
| Bemis, Jervis..... | Footville. | Camp, H. H ..... | Milwaukee. |
| Benedict, J. D..... | Bristol. | Capron, Geo..... | Madison. |
| Benedict, S. G..... | Providence, R. I. | Carleton, W. D..... | Sun Prairie. |
| Benedict, W. G..... | Milwaukee. | Carpenter, J. A .... | Waukesha. |
| Benson, S. W..... | Bloomfield. | Carpenter, J. E..... | Windsor. |
| Bigelow, F. G..... | Milwaukee. | Carpenter, J. H..... | Madison. |
| Billings, Earl..... | Madison. | Carpenter, S. D.. .. | Madison. |
| Bird, I. W..... | Jefferson. | Carr, N. B..... | Madison. |
| Bird T. E..... | Madison. | Carr, Joseph S..... | Eau Claire. |
| Bishop, John C..... | Fond du Lac. | Carter, A. M..... | Johnstown. |
| Black, John..... | Milwaukee. | Carter, Guy..... | Janesville. |
| Blair, Franklin J ... | Milwaukee. | Carver, P. S..... | Delavan. |
| Blanchard, Willard .. | Windsor. | Cary, J..... | Milwaukee. |

Digitized by Google

| Names. | Residence. | Names. | Residence. |
|---|---|---|---|
| Case, J. I. | Racine. | Dean. E. B. | Madison. |
| Chandler, Samuel. | Milwaukee. | Dean, N. W. | Madison. |
| Chapman, T. A. | Milwaukee. | Dean, John S. | Madison. |
| Chase, Enoch | Milwaukee. | De La Matyr, W. A. | Elkhorn. |
| Chase, H. | Milwaukee. | Delaplaine, G. P. | Madison. |
| Cheney, Rufus | Whitewater. | DeMor, A. B. | Milwaukee. |
| Children, E. | Lancaster. | Dewey, Nelson | Cassville. |
| Chipman, A. | Sun Prairie. | Dewolf, E. | Fitchburg, Mass. |
| Chipman, C. R. | Waunakee. | Devoe, A. B. | McFarland. |
| Church, Wm. A. | Milwaukee. | Dexter, W. W. | Janesville. |
| Clapp, G. W. | Fitchburg. | Dickerman, I. A. | Verona. |
| Clark, C. M. | Whitewater. | Dickson, J. P. | Janesville. |
| Clark, Lewis | Beloit. | Dodge, J. E. | Lancaster. |
| Clark, Satterlee | Horicon. | Dodge, H. S. | Milwaukee. |
| Cochrane, John | Waupun. | Doolittle, W. J. | Janesville. |
| Cogswell, A. W. | Brookfield. | Doris, John | Milwaukee. |
| Colby, Charles | Janesville. | Dorn, M. M. | Madison. |
| Coleman, W. W. | Milwaukee. | Dousman, T. C. | Waterville. |
| Colladay, Wm. M. | Stoughton. | Dow, O. P. | Palmyra. |
| Colton, S. B. | Middleton. | Drakely, S. | Madison. |
| Cooper, E. J. | Mineral Point. | Drury, E. W. | Fond du Lac. |
| Cornell, James | Oshkosh. | Dunlap, S. | Burke. |
| Cornwell, H. H. | Verona. | Dunn, Andrew | Portage City. |
| Corrigan, John | Cedarburg. | Dunn, Wm. | Madison. |
| Cottrill, J. P. C. | Milwaukee. | Dunning, Abel | Madison. |
| Cottrill, W. H. | Milwaukee. | Durkee, H. | Kenosha. |
| Cottrill, C. M. | Milwaukee. | Dutcher, J. A. | Milwaukee. |
| Cory, J. | Footville. | Dwinnell, J. B. | Lodi. |
| Crampton, N. B. | Madison. | Eaton, J. O. | Lodi. |
| Crawford, E. B. | Omaha, Neb. | Echlin, J. O. | Janesville. |
| Crawford, J. B. | Baraboo. | Edgerton, E. W. | Summit. |
| Crawl, John | Center. | Edmunds, F. W. | Madison. |
| Crocker, Hans | Milwaukee. | Elderkin, Ed. | Elkhorn. |
| Crosby, J. B. | Janesville. | Elliott, E. | Lone Rock. |
| Cross, J. B. | Milwaukee. | Elliott, Jos. T. | Racine. |
| Crossett, B. F. | Janesville. | Ellis, J. A. | Chicago. |
| Culver, Caleb E. | Shopiere. | Ellsworth, O. | Milwaukee. |
| Cummings, Wm | Fitchburg. | Ellsworth, W. J | Madison. |
| Curtis, L. S. | Wauwatosa. | Elmore, A. E | Green Bay. |
| Curtis, F. C. | Rocky Run. | Elmore, R. P. | Milwaukee. |
| Curtis, Seymour | Fitchburg. | Eldred, John E. | Milwaukee. |
| Curtis, D. W. | Fort Atkinson. | Elson, Charles | Milwnukee. |
| Cutting, J. W | Harmony. | Emmons, N. J. | Milwaukee. |
| Daggett, M. L. | Madison. | Enos, Esihu | Waukesha. |
| Dahlman, Anthony | Milwaukee. | Esterly, Geo. W. | Whitewater. |
| Dahlman, John | Milwaukee. | Fairbanks, E. | St. Johnsb'ry, Vt. |
| Dann, Obed | Janesville. | Farwell, L. J. | Chicago. |
| Danks, E. P. | Stoughton. | Fenn, G. W. | Janesville. |
| Daniells, W. W. | Madison. | Ferguson, D. | Milwaukee. |
| Darling, K. A. | Fond du Lac. | Ferguson, Benj | Fox Lake. |
| Darwin, A. G. | Brooklyn, N. Y. | Fernly, Jno | La Grange. |
| Daubner, Geo. H. | Brookfield Cent'r | Field, Martin. | Mukwanago. |
| Davidson, Adam | Verona. | Field, W. W. | Boscobel. |
| Davis, G. L. | Milwaukee. | Fifield, L. | Chicago. |
| Davis, Jno | Milwaukee. | Fifield, D. E. | Janesville. |
| Davis, N. P. | Pierceville. | Fifield, E. G. | Janesville. |
| Davis, S. B. | Milwaukee. | Finch, Lorin | Bradford. |
| Davis, W. | Center. | Firmin, F. H. | Madison. |

Digitized by Google

| Names. | Residence. | Names. | Residence. |
|---|---|---|---|
| Fisher, C. C..... | Center. | Grubb, W. S..... | Baraboo. |
| Fisher, Elijah..... | Newark. | Guernsey, Orrin.... | Janesville. |
| Fisher, S. W..... | Center. | Gurnee, J. D..... | Madison. |
| Fisher, Seth..... | Center. | | |
| Fitch, D..... | Madison. | Haight, J. M..... | Sacramento, Cal. |
| Fitch, W. F..... | Madison. | Haight, Nicholas.... | Madison. |
| Fitch, W. G..... | Milwaukee. | Hall, Augustus..... | Janesville. |
| Fitzgerald, R. P..... | Milwaukee. | Hallock, Youngs.... | Middleton. |
| Fletcher, John..... | Springfield. | Hall, H. P..... | Madison. |
| Flint, J. G., Jr..... | Milwaukee. | Hanchett, A. M..... | Hanchetville. |
| Folds, Geo. H..... | Madison. | Hancock, Brad..... | Marshall. |
| Foot, E. A..... | Kansas. | Hanks, A. S..... | Milwaukee. |
| Foote, Sydney..... | Madison. | Hammond, L. M... | Janesville. |
| Foote, A. E..... | Milwaukee. | Hammond, E. S.... | Fond du Lac. |
| Fowler, Jacob..... | Oshkosh. | Harrington, N. H... | Delavan. |
| Fowler, James S..... | Milwaukee. | Harris, Jas... ..... | Janesville. |
| Fox, W. H..... | Fitchburg. | Harvey, J. W. H... | Madison. |
| Fratt, N. D..... | Racine. | Hasbrouk, W..... | Eau Claire. |
| Frank, A. S..... | Madison. | Hastings, S. D..... | Madison. |
| Frank, George R..... | Boscobel. | Hausman, Jos..... | Madison. |
| Frankfurth, Wm..... | Milwaukee. | Hawes, J. F..... | Madison. |
| Freeman, C. F..... | Milwaukee. | Hawes, W. N..... | Verona. |
| Friedman, Ignatius... | Milwaukee. | Hayes, A. J..... | Milwaukee. |
| French, Johnathan... | Madison. | Hazelton, Geo. C.... | Boscobel. |
| Fuller, M. E..... | Madison. | Hazen, Chester..... | Ladoga. |
| Fuller, F. D..... | Madison. | Helfenstein, J. A.... | Milwaukee. |
| Furlong, Thomas T.. | Chicago. | Hempstead, H. W... | Milwaukee. |
| Furlong, John..... | Milwaukee. | Hicks, J. H..... | Oshkosh. |
| | | Hibbard, W. D... . | Milwaukee. |
| Gammons, Warren... | Middleton. | Hibbard, Wm. B.... | Milwaukee. |
| Gates, D. W. C..... | Madison. | Higbee, A. T..... | Stoughton. |
| Gaylord, Aug..... | New York City. | Hill, H, J..... | Madison. |
| Gernon, George..... | Madison. | Hill, James H..... | Madison. |
| Gibbs, Chas. R..... | Whitewater. | Hill, J. W. P..... | Windsor. |
| Gilbert, Thomas.... | Oregon. | Hill, P. B..... | Milwaukee. |
| Giles, H. H..... | Madison. | Hill, Robt..... | Milwaukee. |
| Gilman, Henry..... | Stoughton. | Helmer, A. M..... | Milwaukee. |
| Gillett, R. E..... | Tomah. | Hiner, W. H..... | Fond du Lac. |
| Goodenow, H. D..... | Madison. | Hinkley, B. R..... | Summit. |
| Goodrich, Ezra..... | Milton. | Hobart, L. J..... | Milwaukee. |
| Goodrich, G..... | Whitesville. | Hodge, Robt..... | Janesville. |
| Gould, L. D..... | Madison. | Hodson, C. W..... | Janesville. |
| Grady, F. M..... | Fitchburg. | Hœflinger, Carl. ... | Wausau. |
| Graham, Alexander.. | Janesville. | Hogan, Gilbert..... | Janesville. |
| Grant, S. B..... | Milwaukee. | Hollister, R. M..... | Janesville. |
| Grant, Albert..... | Milwaukee. | Holmes, A. M..... | Milwaukee. |
| Graves, R A..... | Ripon. | Holt, David..... | Madison. |
| Graves, S. W..... | Rutland. | Holton, Edward D.. | Milwaukee. |
| Green, Anthony..... | Milwaukee. | Hopkins, Bedford B. | Milwaukee. |
| Green, Geo. G..... | Milwaukee. | Hopkins, James..... | Madison. |
| Greene, N. S..... | Milford. | Hopkins, J. C..... | Madison. |
| Green, Samuel..... | Fitchburg. | Hopkins, E. C..... | Milwaukee. |
| Greenleaf, E. B..... | Milwaukee. | Hoskins, J. W..... | Milwaukee. |
| Greenman, C. H..... | Milton. | Hoskins, Alfred..... | Janesville. |
| Greenman, H. D. ... | Milwaukee. | Houston, Peter..... | Cambria. |
| Gregory, J. C..... | Madison. | Hoyt, J. W..... | Madison. |
| Grinnell, J. G..... | Adams. | Hurlbert, E..... | Oconomowoc. |
| Groom, John..... | Madison. | Hume, Wm..... | Oshkosh. |
| Grover, E..... | Madison. | Hyde, Edwin..... | Milwaukee. |



Digitized by Google

| Names. | Residence. | Names. | Residence. |
|---|---|---|---|
| Ilsley, Chas. F..... | Milwaukee. | Lindsay, E. J..... | Milwaukee. |
| Imbusch, J. H. ..... | Milwaukee. | Little, Thos. H..... | Janesville. |
| Ingham, A. C..... | New York. | Lloyd, Lewis..... | Cambria. |
| | | Lockwood, John.... | Milwaukee. |
| Jackman, Hiram..... | Chicago. | Ludington, H..... | Milwaukee. |
| Jenks, S. R..... | Madison. | Ludington, James... | Milwaukee. |
| Jenkins, J. C..... | Janesville. | Ludlow, A..... | Monroe. |
| Jerdee, L. P..... | Madison. | Lucy, O. K..... | Columbus. |
| Jerdee, M. P..... | Madison. | Lyman, H..... | Dakota. |
| Johnston, Jno., Jr.... | Madison. | Lynch, T. M..... | Janesville. |
| Johnson, M. B..... | Janesville. | Lynde, W. P..... | Milwaukee. |
| Johnson, Joseph..... | Hartland. | | |
| Johnson, John..... | Milwaukee. | Main, Alex. H..... | Madison. |
| Johnston, Hugh L.... | Milwaukee. | Mann, I. L..... | Fitchburg. |
| Johnston, John. . ... | Milwaukee. | Mann, J. E..... | Sun Prairie. |
| Jones, C. H..... | Sun Prairie. | Mann, Henry..... | Milwaukee. |
| Jones, John N..... | Madison. | Mann, Curtis..... | Oconomowoc. |
| Juneau, Paul..... | Juneau. | Macy, J. B..... | Fond du Lac. |
| Janssen, E. H..... | Mequon. | Manwaring, Wm.... | Black Earth. |
| | | Marshall, Samuel... | Milwaukee. |
| Kellogg, L. F..... | Madison. | Martin, A. C..... | Ashton. |
| Keiwert, Emil..... | Milwaukee. | Martin, C. L..... | Janesville. |
| Kent, A. C..... | Janesville. | Martin, Nathaniel... | Monroe. |
| Kershaw, C. J..... | Milwaukee. | Martin, S. W..... | Madison. |
| Kershaw, W. J..... | Milwaukee. | Mason, George A.... | Madison. |
| Keyes, E. W..... | Madison. | Masters, E. D..... | Jefferson. |
| Kimball, M. G..... | Sheboygan. | Mathews, A. K..... | Milwaukee. |
| Kimball, John..... | Janesville. | Matteson, Clinton... | Rosendale. |
| Kingsley, S. P..... | Springfield. | Matts, I. H. B..... | Verona. |
| Kingston, J. T..... | Necedah. | Maxson, O. F..... | Waukegan. |
| Kiser, Wm. C.. ... | Madison. | May, A. C..... | Milwaukee. |
| Kiser, J. C..... | Oregon. | Mayhew, T. J..... | Milwaukee. |
| Klauber, Samuel..... | Madison. | Mayhew, J. L..... | Milwaukee. |
| Knight, E..... | Sun Prairie. | McCarty, F. D..... | Fond du Lac. |
| Kneeland, Moses..... | Milwaukee. | McConnell, T. J.... | Madison. |
| Kneeland, James..... | Milwaukee. | McCormick, J. G... | Madison. |
| Knowles, Geo..... | Milwaukee. | McCollough, And... | Emerald Grove. |
| Knapp, J. G..... | Madison. | McDill, A. S..... | Plover. |
| Koss, Rudolph..... | Milwaukee. | McDonald, A ..... | Alloa. |
| | | McDougal, Geo. W. | Madison. |
| Ladd, M. L..... | Sugar Creek. | McGoech, P..... | Milwaukee. |
| Lamb, F. J..... | Madison. | McKenna, Martin... | Madison. |
| Landauer, Max..... | Milwaukee. | McKenna, David... | Madison. |
| Lapham, I. A..... | Milwaukee. | McLaren, Wm. P... | Milwaukee. |
| Lapham, Henry..... | Summit. | McNiel, David..... | Stoughton. |
| Larkin, B. F..... | Madison. | McGregor, Alex.... | Nepeuskum. |
| Larkin, C. H..... | Milwaukee. | McPherson, J. P.... | Springdale. |
| Larkin, Daniel..... | Madison. | Merrill, Alf..... | Madison. |
| Larkin, William.. ... | Madison. | Merrill, S. S..... | Milwaukee. |
| Lawrence, W. A..... | Janesville. | Miller, John ..... | Madison. |
| Lawton, J. G..... | Green Bay. | Mills, Simeon..... | Madison. |
| Learned, J. M..... | California. | Miltmore, Ira..... | Chicago. |
| Leidersdorf, B..... | Milwaukee. | Miner, Cyrus..... | Janesville. |
| Leitch, W. T..... | Madison. | Miner, John B..... | Milwaukee. |
| Leitch, W. T., Jr.... | Vienna. | Mitchell, Alex..... | Milwaukee. |
| Leslie, John..... | Madison. | Mitchell, J. L..... | Milwaukee. |
| Lester, Waterman.... | Janesville. | Morehouse, L. H... | Milwaukee. |
| Lewis, Herbert A.... | Madison. | Morse, Samuel..... | Milwaukee. |
| Lewis, John L..... | Madison. | Mosely, J. E..... | Madison. |

Digitized by Google

| Names. | Residence. | Names. | Residence. |
|---|---|---|---|
| Mosher, J. C..... | Lodi. | Powers, W. J..... | Black Earth. |
| Moxley, A. R..... | Madison. | Pratt, E. E..... | Chicago. |
| Mullen, James..... | Milwaukee. | Pres't St. Peter's Val. | |
| Murray, George..... | Racine. | Farmer's Club.... | Springfield. |
| | | Pritchard, P. M.... | Fitchburg. |
| Nash, C. D..... | Milwaukee. | Proudfit, Andrew... | Madison. |
| Nazro, John..... | Milwaukee. | | |
| Needham, J. P..... | Wauwatosa. | Rawson, C. A..... | Madison. |
| Newcomb, S. B..... | Cold Spring | Ray, Charles ..... | Milwaukee. |
| Newton, Ephraim.... | Oregon. | Raymond, S. O..... | Geneva. |
| Newton, I. S ..... | East Middleton. | Riordon, Charles.... | Oshkosh. |
| Nicholas, L. T..... | Janesville. | Reed, Herbert..... | Arena. |
| Norris, C. W..... | Milwaukee. | Reed, Harrison..... | Jacksonville, Fla. |
| Norton, J. B..... | Madison. | Ressigue, A. C..... | Janesville. |
| Nott, F. B ..... | Oregon. | Reynolds, M..... | Madison. |
| | | Reynolds, John..... | Madison. |
| Ober, R. P..... | Milwaukee. | Reynolds, Thomas.. | Madison. |
| Oliver, Joseph B..... | Milwaukee. | Reynolds, John..... | Kenosha. |
| Olney, C. W..... | La Cygan, Kan. | Rexford, J. D ..... | Janesville. |
| Orr, G. H..... | Verona. | Rice, E. M..... | Whitewater. |
| Ott, Geo. V ..... | Madison. | Richards, Richard.. | Racine. |
| | | Richardson, D..... | Middleton. |
| Page, H. M..... | Madison. | Richardson, James.. | Buffalo, N. Y. |
| Palmer, H. L..... | Milwaukee. | Richardson, R. J... | Janesville. |
| Palmer, J. Y..... | | Richardson, H..... | Janesville. |
| Palmer, O. M ..... | Oregon. | Richmond, Amaz'h . | Whitewater. |
| Palmer, Henry..... | Oregon. | Riebsam, C. R..... | Madison. |
| Park, John W..... | Vernon. | Robins, J ..... | Vienna. |
| Park, Wm. J..... | Madison. | Robins, J. V. ..... | New York. |
| Parker, C. H..... | Beloit. | Roddis, R..... | Milwaukee. |
| Parmley, Ira..... | Center. | Rodermund, John... | Madison. |
| Parsons, P. B ..... | Madison. | Rodgers, Lawrence.. | Westport. |
| Partridge, J. S..... | Whitewater. | Roe, J. P ..... | Franklin. |
| Patten, L. F..... | Janesville. | Rogers, C. H..... | Milwaukee. |
| Patton, Jas. E..... | Milwaukee. | Rogers, D. J. ..... | Milwaukee. |
| Paul, Geo. H..... | Milwaukee. | Rogers, J. S..... | Burlington. |
| Payne, Wm..... | Janesville. | Rogers, Anson..... | Janesville. |
| Peffer, G. P..... | Pewaukee. | Rogers, H. S..... | Milwaukee. |
| Pember, R. T..... | Janesville. | Ross, James..... | Madison. |
| Perkins, P. M..... | Burlington. | Rowe, Richard W.. | Madison. |
| Perrine, L. W..... | Janesville. | Rowe, W. E..... | Mazomanie. |
| Perry, B. F..... | Madison. | Ruble, Simon..... | Beloit. |
| Pfister, Guido..... | Milwaukee. | Roggles, J. D..... | San Francisco. |
| Phelps, A. Warren... | Milwaukee. | Russell, Harvey.... | Milwaukee. |
| Pierce, C. L..... | Milwaukee. | Ryder, James K.... | Waterloo. |
| Pilgrim, D. T..... | West Granville. | | |
| Pinney, S. U..... | Madison. | Sage, E. C..... ... | New Lisbon. |
| Pickney, B..... | Fond du Lac. | Sailsbury, R. W.... | Fitchburg. |
| Plankington, John ... | Milwaukee. | Sailsbury, D. F..... | Fitchburg. |
| Plumb, J. C..... | Milton. | Sanderson, Edw..... | Milwaukee. |
| Plumb, T. D..... | Madison. | Sanderson, R. B .... | Madison. |
| Plummer, B. C..... | Wausau. | Sarles, John H. .... | Boscobel. |
| Pond, Samuel A..... | Albany. | Schute, Charles..... | Milwaukee. |
| Porter, Wm. F..... | Maine. | Schutt, U..... | Janesville. |
| Porter, Wm. H..... | Marshall. | Scollan, Frank..... | Madison. |
| Porter, G. E ..... | Eau Claire. | Scott, S. B..... | Milwaukee. |
| Post, David ..... | Milwaukee. | Seville, James..... | Merrimac. |
| Power, D. G ..... | Milwaukee. | Sexton, Kellogg..... | Milwaukee. |
| Powers, D. J..... | Chicago. | Sexton, W. F..... | Milwaukee. |

Digitized by Google

| Name. | Residence. | Name. | Residence. |
|---|---|---|---|
| Simmons, C. J..... | Monroe. | Tenney, H. A..... | Madison. |
| Sinclair, Jeff..... | Milwaukee. | Tenney. D. K..... | Chicago. |
| Sharp, J. W..... | Iowa. | Tenney, Samuel..... | Durham Hill. |
| Shaw, J. B..... | Milwaukee. | Terry, A. H..... | Milwaukee. |
| Sheldon, A. H... ... | Janesville. | Terwilliger, Jas..... | Svene. |
| Sheldon, D. G..... | Madison. | Thorson, John..... | Milwaukee. |
| Sheldon, S. L..... | Madison. | Tibbits, Geo. M..... | Milwaukee. |
| Shepherd, C..... | Milwaukee. | Tierney, K..... | California. |
| Sherman, Amaziah... | La Prairie. | Thompson, W. H... | Chicago. |
| Sherman, George.... | La Prairie. | Thompson, Dr. W... | Madison. |
| Sherman, J. M..... | Burnett. | Thorp, J. G..... | Eau Claire. |
| Sherwood, J. C..... | Dartford. | Todd, J. G.... .... | Janesville. |
| Shipman, S. V..... | Chicago. | Tolford, J. W..... | Neillsville. |
| Shipman, A. C..... | Sun Prairie. | Torgerson, Lars..... | Madison. |
| Skelley, Charles..... | Janesville. | Torrey, R. D..... | Oshkosh. |
| Skinner, George J.... | Sioux Falls, D.T. | Townley, John..... | Moundville. |
| Skinner, E. W..... | Turner, D. T. | Treat, R. B..... | Chicago. |
| Slaughter, G. H..... | Middleton. | Treat, George E.... | Milwaukee. |
| Slaughter, W. B..... | Middleton. | True, W. H..... | Fitchburg. |
| Sloan, I. C..... | Janesville. | Twining, M. S..... | Magnolia. |
| Slocum, G. A..... | Chicago. | Utter. Jas..... | Oregon. |
| Smith, Winfield..... | Milwaukee. | Van Brunt, W. A... | Horicon. |
| Smith, Angus..... | Milwaukee. | Van Cott, Albert B.. | Chicago. |
| Smith, Adam..... | Burke. | Van Etta, Jacob.... | Madison. |
| Smith, Geo. B..... | Madison. | Van Kirk, N.. .. . | Milwaukee. |
| Smith, J. B..... | Milwaukee. | Van Norstrand, A. H | Green Bay. |
| Smith, S. W..... | Janesville. | Van Slyke, N. B.... | Madison. |
| Smith, H. L..... | Janesville. | Vaughan, O. A..... | Lodi. |
| Smith, M. C..... | Janesville. | Viall, Andrus..... | Madison. |
| Smith, S. B..... | Vernon. | Vilas, Chas. H..... | Cleveland, Ohio. |
| Smith, J. Maurice... | Chicago. | Vilas, L. B..... | Madison. |
| Snell, H..... | Madison. | Vilas, L. M..... | Eau Claire. |
| Spaulding, William .. | Janesville. | Vilas, Wm. F..... | Madison. |
| Spaulding, Jos..... | Janesville. | Wackerhagen, E.... | Racine. |
| Spencer, Jas. C..... | Milwaukee. | Wait, J. B..... | Waitsville. |
| Spencer, R. C..... | Milwaukee. | Warren, J. H..... | Albany. |
| Squire, Thos. H..... | Waterloo. | Warren, W. R..... | Madison. |
| Stannard, A. C..... | Milton. | Webster, James..... | Dunville. |
| Stark, Chas. A..... | Milwaukee. | Webster, Martin.... | Fox Lake. |
| Steele, Chester..... | Milwaukee. | Webb, James A.. .. | Janesville. |
| Stephenson, Isaac.... | Marinette. | Welch, W..... | Madison. |
| Stevens, Geo. C..... | Milwaukee. | Wells, Daniel L.... | Milwaukee. |
| Stevens, J. T..... | Madison. | Werner, John..... | Sauk. |
| Steensland, H..... | Madison. | West, Henry..... | Madison. |
| Stewart, C. K..... | Danville. | West, S. C..... | Milwaukee. |
| Stewart, G. H..... | Colorado Spg's, C | West, Henry M..... | Milwaukee. |
| Stilson, Eli..... | Oshkosh. | Whaling, J. M..... | Milwaukee. |
| St. John, J. W..... | Janesville. | Wheeler, Geo. F ... | Waupun. |
| Stockman, John ... . | Milton. | Wheeler, Guy..... | La Prairie. |
| Stone, G..... | Beloit. | Wheeler, W. A..... | Middleton. |
| Storm, Wm..... | Madison. | Wheeler, L. A..... | Milwaukee. |
| Stowe, La Fayette.... | Sun Prairie. | Wheelock, W. G.... | Janesville. |
| Street, Richard..... | Waukesha. | Wheelwright, J..... | Middleton. |
| Sullivan, James..... | Burke. | White, A..... | Verona. |
| Sutherland, C..... | Svene. | Whiting, W. F..... | Milwaukee. |
| Swain, Wm. W..... | Madison. | Whitney, W. F..... | Milwaukee. |
| Tallman, W. H..... | Janesville. | Wicks, Thomas..... | Milwaukee. |
| Taylor, E..... | Mukwonago. | Wight, O. W.... . | Milwaukee. |
| Taylor, W. R..... | Cottage Grove. | Wightman, H..... | Black Earth. |

Digitized by Google

| Name. | Residence. | Name. | Residence. |
|---|---|---|---|
| Wilcox, C. T..... | Janesville. | Woolcott, E. B ..... | Milwaukee. |
| Wilkins, A. W..... | Milwaukee. | Wooley, J. T..... | Milwaukee. |
| Willey, O. S ..... | Benton Harbor, Mich. | Wootton, Robert.... | Madison. |
| | | Worden, Ed..... | Madison. |
| Williams, C. L ..... | Madison. | Worthington, B. M.. | Madison. |
| Williams, C. H..... | Baraboo. | Worthington, D .... | Madison. |
| Williams, D..... | Darien. | Worthington, Geo... | Milwaukee. |
| Williams, Daniel . .. | Madison. | Wright, D. H ..... | Madison. |
| Williams, Daniel .... | Summit. | Wright Geo ..... | Mt. Horeb. |
| Williams, G. G.. ... | Whitewater. | Wright, J. S ..... | Emerald Grove. |
| Williams, J. P ..... | Janesville. | Wright, Josiah S ... | Janesville. |
| Williams, Randall ... | Janesville. | Wylie, Geo. W..... | Elkhorn. |
| Williams, S. B ..... | Madison. | | |
| Williams, S. G ..... | Janesville, | Young, J. E ..... | Janesville. |
| Wilson, Wm..... ... | Westport. | | |
| Wilson, Zebina ..... | Palmyra. | Zwietush, Otto ..... | Milwaukee. |

Digitized by Google

# OFFICERS OF THE SOCIETY.

1875.

---

PRESIDENT.

ELI STILSON, - - - - - - - - - OSHKOSH.

VICE-PRESIDENTS.

| | | | |
|---|---|---|---|
| *1st Cong. Dist.*, | - - | T. C. DOUSMAN, - - - | WATERVILLE. |
| *2d* | " - - | GEO. E. BRYANT, - - | MADISON. |
| *3d* | " - - | J. H. WARREN, - - - | ALBANY. |
| *4th* | " - - | JNO. L. MITCHELL, - - | MILWAUKEE. |
| *5th* | " - - | SATTERLEE CLARK, - | HORICON. |
| *6th* | " - - | R. D. TORREY, - - - - | OSHKOSH. |
| *7th* | " - - | J. G. THORP, - - - - | EAU CLAIRE. |
| *8th* | " - - | JNO. T. KINGSTON, - - | NECEDAH. |

SECRETARY.

W. W. FIELD, - - - - BOSCOBEL.

(Office at Madison.)

TREASURER.

F. J. BLAIR, - - - - MILWAUKEE.

ADDITIONAL MEMBERS OF THE EXECUTIVE BOARD.

| | |
|---|---|
| Dr. C. L. MARTIN, - - - - | JANESVILLE. |
| N. S. GREENE, - - - - - | MILFORD. |
| A. A. BOYCE, - - - - - | LODI. |
| N. D. FRATT, - - - - - | RACINE. |
| E. J. COOPER, - - - - - | MINERAL POINT. |
| ISAAC STEPHENSON, - - - | MARINETTE. |
| N. W. DEAN, - - - - - | MADISON. |

Digitized by Google

# TRANSACTIONS.

## ANNUAL REPORT.

To His Excellency, Harrison Ludington,
*Governor of Wisconsin*:

Sir:—I have the pleasure to herewith present the fourteenth volume of the Wisconsin State Agricultural Society, 1875–6, and I trust it may be found of equal, if not of greater interest and benefit to those for whom it is especially designed, the farmers and those engaged in the varied avenues of useful industry. The closing year of the century, 1875, has been somewhat discouraging to certain branches of the great agricultural interests of the State. A greater breadth of corn was planted than in any previous year in our history, but the unusually late season, followed by early frosts in August and September, entirely ruined thousands of acres, and seriously injured nearly every field of corn in the State.

The loss of this staple cereal produced a marked effect upon the beef and pork product, many cattle and hogs having been sent to market in a half-fatted condition, and thousands of stock-hogs were shipped to Iowa, Nebraska, Kansas, and other western States for want of corn to feed them. Wheat was a fair, average crop in the northern and eastern portions of the State, while in the more central and southern part the chinch-bug did serious damage, in many instances entirely destroying this cereal. Oats were a heavy crop and of extra quality. Potatoes and vegetables were abundant and excellent. Prices of the cereals and stock product ruled fair and were highly remunerative where a fair crop was produced. I would here again urge upon the farmers of Wisconsin the importance of farming less upon the exhaustive plan—raising small-grain

Digitized by Google

and shipping to distant markets—and turn their attention to grass, corn, and stock, or to farm upon the compensating plan, keeping the soil rich in plant-food, that it may produce abundantly,and concentrating the surplus crops into stock or products which will require the least cost to transport to the place of consumption, according to its value. And in this connection I desire to repeat what I have substantially said in one or two former volumes, and what the farmers all know, too, but will not act without continual reminders. It is this, never ship from the State,stock, cheese, butter, or other products, except it is of the best quality, and hence will command the highest price. It costs just as much to ship two steers, weighing 800 pounds each and worth 2½ cents per pound, or $50, as to ship one well-fatted steer,weighing 1,600 pounds and valued at 5 cents per pound, or $100. Comparatively it costs nothing to transport one-half the weight of the latter to market. All other products come within the same rule. *Only the best pay.*

The Wisconsin State Agricultural Society is earnestly striving to better the condition of the farmers and all others engaged in industrial, productive, useful enterprises. By its annual exhibitions it has stimulated better productions in all branches of farming. By its annual publication and conventions it has caused a deep interest in other important subjects outside of the mere routine-work of the farm; showing the intimate relations and connections the farmer bears to all other useful employments of the State. The Society is to work for others, not for itself. It desires to reflect the sentiments and views of the industrial people, the classes it was intended by its founders to aid and encourage, and, if possible, it will take advance steps upon all questions it deems of vital importance to the useful industries, thus quickening thought and action among producers, and leading them to a higher position in the social, political, and all other relations of the State. The farmer is no longer in the background, turning the great wheel which moves the machinery of the world. He is fast moving to the front and showing a capacity to fully care for the great interests his calling represents. This Society has done much to raise the standard of education and intelligence and place the industrial workers upon a higher plane, in an intellectual atmosphere where they can think for

Digitized by Google

themselves, and keep step with the advance, progressive spirit of the times. We desire here to say that in this noble work the State has generously aided us by liberal appropriations of money, publishing our annual volume of transactions, and supplying us with elegant and commodious rooms in the capitol. For all these favors we here tender our thanks, and make our Centennial bow.

The grange, farmers' club, and other industrial societies have done much the last year to promote the interests of those engaged in the different branches of farm-work. Meetings have been frequently held, and when the special work was concluded, topics of general interest have been read, and discussions had thereon with marked effect. Very little difficulty arises in getting up a deep interest upon the subjects presented at these meetings. If some one is prepared to lead off, the observations and experience of others naturally and easily follow. Social science and political economy, I am glad to say, are eliciting much interest, a complete knowledge of which will enable these societies to aid in redressing many of their grievances. They cannot pursue this matter too closely. Committees to collect information and facts relative to finance, transportation, co-operation, and the like interests, which are so closely connected with productive industry, will be of great value. How to produce the largest products with the least expenditure of labor, and how to dispose of the surplus to insure handsome profits for such labor, are questions you cannot too well understand. "These organizations have caused business to be conducted on a more economical basis, and consequently have cheapened all goods bought for cash. They have brought producer and consumer nearer together. They have inaugurated in public sentiment a revolution in favor of a cash system. It will take years to complete it, but that revolution has commenced, and millions have already been saved to the people. They have inspired the whole agricultural world with a spirit of economy. They have already begun to elevate farming as a profession, and have drawn farmers nearer each other socially and for business purposes. They have given impetus to intelligent farming everywhere, and have sown seeds that will ripen into a rich harvest of prosperity for the farmers, and consequently for all classes. They have inaugurated a reformation that will not cease until virtue and

Digitized by Google

honesty once more bear sway where ignorance and corruption hold high carnival. They have put three millions of farmers to thinking. Are not these achievements enough for a short time?"

The dairy-interest of the State is of increasing importance. The cheese and butter products, particularly the former, has been largely increased the last year and with good paying results. There are two dairy boards of trade, one at Sheboygan and one at Watertown. I am informed that the sales at the former board have been mostly for cash, and that the profits have been quite satisfactory. The Watertown board have shipped mostly to commission-men on the seaboard or to Europe, and in the main the returns have been remunerative. I am of the opinion that the cash system is the true one in all departments of farming, and if these boards of trade are to be of permanent value, as doubtless they can be, the true plan is for all manufacturers of dairy products to join them, and agree to sell their cheese and butter on certain fixed dates for cash. This will attract home and foreign buyers, who will pay what the market will afford at the time. Relative to the dairy products of the State, and other matters of interest connected with butter and cheese manufacture, price, &c., I quote briefly from the last report (1875) of the secretary of the State Dairyman's Association, Hon. D. W. Curtis, of Fort Atkinson:

"In 1872 the amount of cheese manufactured in Wisconsin, according to the lowest estimate I can make, was not far from 6,000,000 pounds. The price ranged from eight to twelve cents. The amount of butter made that year was about 25,000,000 pounds. The average price was about fifteen cents per pound. Now, in 1874 the amount of cheese made in Wisconsin was about 13,000,000 pounds. The price ranged from ten to fourteen cents per pound at wholesale rates. The amount of butter made, taking the ratio of past increase as a criterion, was about 30,000,000 pounds. The average price I believe was about twenty-two cents. We are here presented with the anomalous fact in commerce, of a great increase in the amount of production, and yet a corresponding increase in the average price received. By what can it be explained? I think the action of the State Dairymen's Association, in clearing channels of export, in persistently pushing upon the notice of the great markets of the

Digitized by Google

world the fact that there was as good cheese made in Wisconsin as anywhere, and by combination and intelligence securing low freights, may be fairly considered as one of the chief forces in securing these results, so far as cheese is concerned. In relation to the 'butter side' of the question, I believe the result may be partially attributed to the same agency: First, indirectly, by the impulse given to cheese-making, thus leaving to the milk made into butter more profit than it would otherwise have had. Directly by stimulating a spirit of progress in making good butter, and persuading the maker to deal directly with butter-markets, where he is brought sharply face to face with the errors of his practice. Thus it may be seen, gentlemen, that in your associative capacity you become a power of vast good to the productive interests of the State. These facts become, then, not merely a subject for congratulation, but a clear testimony to the wisdom of your previous purpose and methods of action, and should clinch the argument for the pursuit of the same purpose in the future. There is too great indifference manifested by a large portion of the dairymen of the State relative to the purpose and efforts of this Association, and it is certainly to be hoped that many who have not hitherto assisted at the wheel may come forward and bear a part of the necessary burden. The future outlook is not as favorable in many respects as could be desired. Although maintaining as yet an unbroken prosperity, it would not be unwise for dairymen to remember that in the present disordered condition of finances and business apathy all over the country, this pursuit must naturally suffer with the rest. One result, I apprehend, will be a large reduction in home-comsumption. To a large portion of the American public, butter and cheese is yet a luxury which may and will be dispensed with, when hard times and no work comes upon them. This should teach us not to expect high prices another season. But I do not anticipate but that the ratio of profit between dairy and other products will continue, thus proving in the future, as in the past, that dairy-farming is the most stable of any."

The amount of cheese made in the State in 1875, was upwards of 15,000,000 pounds.

Some of the reasons why farming doesn't pay better is,

1. Work is not done at the right time. Machinery is not kept in

Digitized by Google

repair so as to be of use when needed. Time is spent in getting it repaired which is of ten-fold more value than at other and less hurrying seasons of the year. Seed-corn, and other grains and seeds intended for planting, are oftentimes poor, will not germinate, or if they do, haven't sufficient strength and vitality to nourish the young plant until it can obtain sustenance from the soil; hence the plant is stunted and dwarfed, producing only a light crop, even though the same labor was bestowed as upon land with perfect seed and which produces an abundant harvest.

2. Stock of the best and most profitable kinds are not bred, and are not properly fed, watered, and housed to warrant the best profits. If dairy-cows are kept, some will yield each year a handsome profit, while others will not pay their keeping. The cow which will produce 800 pounds of cheese per annum is profitable, while the cow making only 200 pounds is doubtless kept at a loss. The same is true of cattle for fattening. The short-horn steer will net his owner, if well fed and cared for, handsome returns, while the scrub-breed will barely pay for the feed and care.

3. Grasses and grains are left to stand some days after they are in the most profitable condition to cut and properly secure, until oftentimes the former have lost a portion of their nutritious qualities, and the latter is over-ripe, and shelled and scattered for the birds, or to waste. These valuable crops, after they are harvested, are often exposed to heavy rains by being miserably stacked. Thousands of acres of excellent wheat in our sister States, Iowa and Minnesota, were nearly ruined last autumn by a careless and shiftless manner of stacking pursued by their people. To be prepared for the worst and hope for the best, is the only safe rule in such cases.

These, and many other reasons might be given why "farming doesn't pay," and the thoughtful farmer will call them to mind when reading the above, and, if wise, will correct them.

Let the discussions on Political Economy go on. It is not an established science upon which all men agree; hence, may not be perfect. It is more or less a theory still. When the first principles of this science were enunciated a hundred years ago they were largely based upon assumption. Our ablest writers differ upon this

Digitized by Google

important subject, and a full and free discussion will give us more light—will give us the truth. We are, perhaps, as a people, too apt to take for granted everything which is spoken or written by men of ability and learning, without testing it by our own common sense and judgment of right. I believe the observation and experience of the people in the use of a greenback currency since its first issue, and the effect which such money has had upon the productive industries of the world, has educated the people more, has taught them more of the underlying principles of political economy than were ever taught by all the writers upon this science in the last hundred years. With the enormous indebtedness, private, corporate, State, and national, the interest and principal of which must be paid from the surplus wealth of the producers, it will be well for us to look about and see if our monetary laws are not at fault, and if a change to a strictly greenback currency would not afford relief to our industries. I believe the theory advocated by the bullionists will bring us to ruin or repudiation in the end. Machinery and implements of improved styles are doing much to stimulate production and give us a large surplus; but the most valuable tool of the age is the greenback. It saved us in war when gold could not; it will save us in peace by enabling us to produce more abundantly, and out of this surplus to liquidate our debt, and turn the tide of gold in our favor, when we can pay in gold as well as in any other commodity.

What is a greenback? Let Ex-Secretary Chase answer:

"Did you ever think what it was? Why, it is simply the credit of this great American people put in the form of money, to circulate among the very people whose credit makes it worth anything. When I was Secretary of the Treasury, the question arose, how should these vast armies and navies be supplied? How should the boys be fed in the field, the sailors in ships, and provisions made for their support, their clothing, their food, and transportation? I found the banks of the country had suspended specie payment. What was I to do? The banks wanted me to borrow their credit or to pay them interest in gold upon their credit. They did not pay any gold, or propose to pay any, themselves, but they wanted me to borrow their notes. I said, No, gentlemen; this great American people is worth all of you put together, and I will take the credit of the people and cut it up in the form of little bits of paper, and

Digitized by Google

we will circulate that paper, and will receive that for bonds, upon which we will punctually pay the interest in gold; and then, in order that the national currency might be permanent, and that nobody might have just cause to complain, I called the national banking system into existence, and pledged every bank to redeem its currency in greenbacks, and the government pledged that every dollar should be redeemed in the end—the securities to be pledged and provided that in the end everything should be made equivalent to gold. This is the true idea of a greenback. It is the credit and property of the American people, made to serve the purpose of money in the midst of a great strife, when we must have everything we can get. And, in my humble judgment, if out of this war this national currency comes as is provided in our platform, so that no Western farmer or merchant will be obliged to pay tribute to the East in his exchange; so that we shall not loose upon exchange so large a profit upon our industry; so that the laborer receive his dollar, or two dollars, or dozen dollars, at the night or week's end, shall be perfectly sure that it will not turn to dust and ashes before the morning sun rises; I say, if you can get such a sound currency as this, then this country, at least, has been without one of the collateral benefits of the war; if you can take your money on the Atlantic and go to the Pacific, and pay your bills all the way without having to change the currency at every tavern you stop at. * * If the Government is administered as it should be, with proper vigor and economy, every dollar in greenbacks will be as good as a dollar in gold."

One sometimes hears the expression, "Only a farmer;" I want to see the word "only" left off. It can be, when those engaged in farming will place those of education and ability among them in positions of trust and responsibility—those whose sympathies are with the farmers and who can command respect. Intelligence only can cope with intelligence, and business and trade interests understand this full well, and govern themselves accordingly. The farmer's occupation is the most useful of any to society. His industry produces from the soil that which feeds all other classes. His is the foundation one upon which all others must build. None can prosper without his aid and support. None produce the food

Digitized by Google

they consume except the tiller of the soil, and I regret to say that few comparatively earn it. Much of business, so-called, of our country to-day, is of a speculating, gambling character—trying in a sharp way to obtain something from others without rendering an equivalent. There are those whose pursuits are as necessary to society as the farmers, such as those engaged in manufactures, commerce, merchandizing, professions, public officers, and the like trade and business interests. Their occupations require more brain and less physical labor than is usually given to farming. Would not more brain-labor elevate this foundation calling, and make it pay better? Man's mind can be made strong and active only by exercise, thought and study, the same as the arm is made strong and vigorous by daily use. Who is so well calculated to think over everything which pertains to his business as the man who is at the head of it. Thought upon any subject never gave any one less light. I am aware that there are classes in society who are getting nervous over the fact that farmers are beginning to think upon other subjects pertaining to their true interests, as well as how they shall supply consumers of bread and meat at a cheap price. These same gentlemen seem to be alarmed—are afraid the producers are going to know too much. They don't like to have them making the inquiry, why it is that men at the head of private corporations are receiving ten to twenty-five thousand dollars per annum, while the same talent and enterprise in any of the purely productive channels of industry cannot earn one-fourth such sums?

They are too inquisitive. They want to know who pays these salaries. Whether it does not really come out of the producers pockets. Some say we are really subverting the real interests and objects of our Society when we allow discussions upon the currency question, as at our last two winter meetings. I believe the farmers range of thought and study should be as broad as those of any occupation or profession. That his interest and the good of society demand it. As to the currency, if there is any one question of more vital importance to him than another, it is this, as it directly affects the price of his labor and surplus products. The producers of wealth should look well to the causes which produce abundant products, and with equal care watch the machinery instituted by shrewd, clear-brained men, who, without labor, intend to strip them of all their profits. To the farmers, and all engaged in legit-

Digitized by Google

imate, honorable pursuits, I would say, follow the leadership of your own good sense, aided by practical thinking men in whom you can confide. Determine for yourself all the social, business, political, and all other questions, for there is no excuse in these days of allowing others to do your thinking for you.

The press is a great power; a great public educator. The lessons which newspapers teach, the principles they inculcate are day by day woven into our thoughts, and find expression in words and deeds. In order that their teachings may be of value to the farmer; and the same will apply to all other callings. They must be based upon principles of justice and right; they must advocate his true interests, showing clearly the relation he occupies to each and all other industrial, trade, and commercial interests. There are several papers now circulating in the State, and I am glad to know their number is fast increasing, which are manfully battling for the interests of the farmer, and all others engaged in useful industries. These papers should be sustained, upheld, and generously supported, that they may be able to vindicate the cause of the industries with more force and power, educating the masses to a higher plane and enabling them to control the country in the interest of labor, and those who hold the property and real wealth of the world. The country is now governed by the few, the sharp, able-minded, and shrewd politician, and laws enacted favoring certain class interests, instead of those which work the "greatest good to the greatest number." This ought to be changed, and the laws made just and equal toward all legitimate pursuits. To accomplish this, the masses must be educated and elevated and show their ability and capacity to direct and control, and one of the great agencies in this reform is the newspaper, ably edited and devoted to your interests.

For the Executive Board.

W. W. FIELD,
*Secretary.*

STATE AGRICULTURAL ROOMS,
*MADISON, May 10, 1876.*

Digitized by Google

# PROCEEDINGS.

## Executive Board Meetings.

OFFICE OF THE SOCIETY, PLANKINTON HOUSE,
*MILWAUKEE, September 6, 1875.*

In accordance with a provision of the by-laws of the Society, that the "executive committee shall meet on the first day of the annual fair," the board convened in the convenient reading room of the Plankinton House, said room having been kindly furnished the Society by the gentlemanly proprietor, H. B. Sherman, Esq., and for the use of which the board desire to here express their sincere thanks.

President Stilson in the chair.

Present—Vice-Presidents Dousman, Bryant, Warren, Mitchell Clark, and Torrey, Treasurer Blair, and Messrs. Martin, Greene Boyce, Fratt, Cooper, Stevenson, Dean, and Secretary Field.

President Stilson stated that the board was convened under the by-laws of the Society, the object of such meeting being to consult together relative to the annual exhibition then about to open, and to take such action as the board might deem essential to the highest success of the same. He said that the city of Milwaukee had again, the same as for years past, contributed generously, donating the use of the fair grounds to the society, and in many ways aided to make the fair a success. On behalf of the board he thanked Milwaukee for what she had done, and hoped she would continue to aid the Society in all her efforts to stimulate and encourage the agricultural, manufacturing, and other useful enterprises of the State, as he doubted not she would.



Digitized by Google

The officers of the Society, whose duties were to arrange for the annual exhibition, had, he believed, discharged those trusts efficiently, and the grounds, buildings, stalls, and other appointments were, he was happy to say, in excellent condition. The season had been late and unfavorable to some branches of farming. Chinchbugs, frost, floods, and other evils had overtaken many the past season and reduced their profits, and yet, notwithstanding all these, he believed the State had been reasonably prosperous, taking all her industrial interests into consideration, and he thought that if the weather was favorable the fair would prove a success, both in exhibits and attendance.

Remarks were made by the superintendents of the different departments, each stating that the prospect for a fine display in his department was never better. The general impression seemed to prevail, that the show in each department would be creditable, and that the dairy products would far exceed any former exhibition in the northwest, if not in the United States.

L. G. Kniffin, Esq., State agent of the Patrons of Husbandry, appeared before the board for the purpose of securing space to erect a temporary building or tent in which to exhibit articles kept for sale to members of the order. On motion free space was allotted him, and the sum of thirty dollars donated to aid in erecting the temporary structure. Col. J. M. Arnold came before the board on behalf of the First Regiment Wisconsin Militia, desiring free admission to the fair grounds on Thursday the 9th of September for his regiment, for their annual inspection by the adjutant-general, and review by the Governor and staff.

On motion the request was granted

Numerous propositions were received, discussed, and settled relative to the exhibition, when the board adjourned until Tuesday evening, September 7, at 8 p. m.

---

*TUESDAY, September 7, 8 P. M.*

Board met, President Stilson in the chair.

Quorum present.

On motion, an auditing committee, consisting of Messrs. Mitchell, Fratt, and Clark, was appointed.

Digitized by Google

The board was in session on this and the following evening, consulting upon and settling local questions presented by the superintendents and other heads of departments, the details of which it seems unnecessary to present in these minutes.

Adjourned on Wednesday evening to Friday evening, at 8 P. M.

---

*FRIDAY, September 10, 1875.*

Board met, as per adjournment, at 8 p. m.

President Stilson in the Chair.

Quorum present.

Secretary Field stated that it had been customary to pay premiums and accounts on the evening of the last day of the fair, and that the books of the Society were in readiness to proceed with that work; that if any parties desired to leave the city immediately, their orders for the amount awarded would be sent them by mail, on their written request.

Premiums and audited accounts were paid until a late hour, when the board adjourned to 8 p. m. the next day.

---

*SATURDAY, September 11, 8 A. M.*

President Stilson, Auditing Committee Mitchell, Fratt, and Clark, Treasurer Blair and Secretary Field, present.

The payment of accounts and premiums continued until 12 m., when an adjournment was moved and carried, until the 17th of September, to convene at the same place, at 2 p. m.

---

*FRIDAY, September 17, 2 P. M.*

President Stilson, Auditing Committee Mitchell and Clark, and Messrs. Blair and Field, present.

Premiums and audited claims were paid on this and the following day until 12 m., when, on motion, the board adjourned *sine die.*

Digitized by Google

## DECEMBER MEETING.

STATE AGRICULTURAL ROOMS,
*MADISON, November 30, 1875.*

As provided in the by-laws, the executive board met in the rooms of the society at 7½ p. m.

Present—President Stilson, Vice-Presidents Clark, Dousman, Mitchell, Bryant, and Warren, and additional members Messrs. Fratt, Dean, Boyce, Blair, and Field.

President Stilson in the chair.

Treasurer Blair read his report showing the financial standing of the Society at the close of the fiscal year, December 1, 1875, which can be found in this volume, 1875–6, under the head of "Society Meetings." A full examination of the vouchers of the treasurer was made by the board, and a comparison had with the stub-book and bills of the Secretary, and finding the same correct, were unanimously approved.

On motion of Vice-President Clark, the Secretary was requested to draw an order on the Treasurer for the balance due—nineteen hundred dollars—and interest for six months—on the land—Fair Grounds of the Society, at Madison.

On motion, the President and Secretary were authorized to employ a phonographic reporter for the agricultural convention to be held in February, 1876.

Vice-President Warren submitted the following resolution, which was unanimously adopted.

*Resolved*, That the several gentlemen who have served this Society in the capacity of President, Secretary, and Treasurer are hereby requested to furnish their portraits, in such form as they may see fit, for permanent preservation in the Agricultural Rooms; and the Secretary is hereby instructed to communicate to those gentlemen the substance of this resolution, and to solicit their compliance with this request at their earliest possible convenience.

On motion, adjourned *sine die*.

Digitized by Google

## FEBRUARY MEETING.

STATE AGRICULTURAL ROOMS,
*MADISON, February 1, 1876.*

The executive board of the Wisconsin State Agricultural Society met in their rooms in the Capitol at 7½ p. m., as required by the by-laws, to locate the State Fair for 1876, and for a revision of the premium-list and the transaction of any other business properly brought before them.

Present—President Eli Stilson, Vice-Presidents T. C. Dousman, Geo. E. Bryant, John L. Mitchell, Satterlee Clark, R. D. Torrey, J. G. Thorp, and John T. Kingston, and additional members of the executive board, Messrs. Dr. C. L. Martin, N. D. Fratt, N. W. Dean, A. A. Boyce, E. J. Cooper, Isaac Stevenson, Treasurer F. J. Blair and Secretary W. W. Field.

President Stilson in the chair.

Vice-President Dousman, moved that the resignation of N. S. Greene as a member of this board, now in the hands of the Secretary, be taken up for consideration. Adopted.

A general informal conversation was had among the members of the board, relative to the resignation of Mr. Greene, each regretting that he insisted upon severing his connections with the executive board, as his services to the board and Society, had been invaluable, especially in the horse department, with which he had been so many years connected.

The resignation was accepted, and on motion of Vice-President Dousman, Gen. H. C. McDowell, of Oconomowoc, was elected to fill the vacancy.

Reports of superintendents were laid before the board by Secretary Field, and on motion were read and their recommendations duly discussed.

Mr. Fratt presented a communication from the Racine Silver-Plate Company, which was read and referred to a committee, consisting of Messrs. Clark, Bryant, and Boyce.

Secretary Field presented a communication from Gen. J. C. Starkweather, relative to a picture of his exhibited in the Fine-Arts Hall in 1875, the frame of which was injured.

On motion, Mr. Cooper, superintendent of the fine-arts department, was requested to prepare a statement, setting forth the facts

Digitized by Google

relative to the return of this picture, and that the Secretary forward it to Gen. Starkweather, with such other facts as might be in his possession.

Vice-President Mitchell, on behalf of the city of Milwaukee, offered the Fair Grounds to the Society for the exhibition of 1876, free of charge, the same as heretofore given.

Dr. C. L. Martin said he was authorized to speak for the Rock County Agricultural Society, who would give the State Society the use of their Fair Grounds in Janesville, and $3,500 in cash, to be expended under the direction of the State Agricultural Society, for buildings, stalls, and other needed improvements.

Vice-President Bryant stated that the city of Madison would put the grounds of the State Society in suitable condition for the exhibition of 1876 free of charge, if the board would locate the fair there.

On motion, an informal ballot was had relative to the location of the State Fair of 1876, with the following result:

Whole number of votes cast fifteen; of which number Milwaukee received seven, Janesville four, and Madison four.

On motion, a formal vote was had and resulted as follows:

Milwaukee eight, Janesville two, and Madison five.

Milwaukee having received a majority of all the votes, on motion, the fair was located at Milwaukee by a unanimous vote.

"Rules of entry," subdivision two, amended so as to read as follows; "All entries for competition must be made before Monday at 9 p. m., as at that time the office of entry will positively be closed."

Subdivision four also amended, by adding thereto as follows: "And no officer of the Society shall compete for a premium in the department over which he is superintendent."

Adjourned to 9 a. m., Wednesday.

---

*WEDNESDAY, February 2, 9 A. M.*

Dr. Martin moved that the State Fair be held from the 11th to the 15th inclusive, of September.

Mr. Dean moved an amendment, that it be held the 25th to 30th of the same month.

Amendment lost, and the motion of Dr. Martin agreed to.

Digitized by Google

Secretary Field presented communications from M. L. Butterfield, of Waukesha, and Dr. T. J. Freeman, of Milwaukee, relative to silver medals.

The board requested the Secretary to have a medal engraved and sent to the former and to pay the latter the difference in price between the large and small medals.

Committee appointed on the communication of the Racine Silver-Plate Company, reported that in their judgment, it would be advisable to offer certain premiums in silver-plate instead of money, the person to whom such award was made to have the privilege of making such selection as he or she might desire.

The report was adopted as the sense of the board.

Communication of John S. and Ira Rowell was presented by their counsel and referred to Messrs. Mitchell, Kingston, and Dean, who after duly considering the subject matter thereof, made the following report with a request that the Secretary send a copy to the Messrs. Rowell.

Report adopted.

*To the Executive Board of the Wisconsin State Agricultural Society:*

The committee to whom was referred the claim of John S. Rowell and Ira Rowell for first money in the "free for all" purse for their mare "Badger Girl," with the accompanying affidavits of A. M. NcNaughten and W. M. Ormand, patrol-judges, and Roy Bush, driver of said mare, respectfully report as follows:

The claim of the owners of "Badger Girl" for first money in the "free for all" purse, seems to rest upon a question of fact and not upon any error made by the judges in the stand, under the "National Trotting Rules" given for their guidance, whether the leading horse, Phil. Sheridan, ran enough to warrant his setting back, or ruling out, thereby giving first money to Badger Girl was a question of fact which the judges in the stand concluded upon from their own observation, coupled with the report of the patrol-judges. Of this question of fact the judges in the stand were the final arbitrators, and it is the opinion of the committee that it is not in the province of the board to go behind their decision in this particular. The board is referred, in this connection, to rules 26, 27, and 28 of the National Trotting Association.

In the matter of protest, the national rules say: "Protests

Digitized by Google

may be made verbally before or during a race, and shall be reduced to writing, and shall contain at least one specific charge and a statement of the evidence upon which it is based, and shall be filed with the judges, association, or proprietor before the close of the meeting." The trot in question took place on Thursday of fair week; there was ample time for the presentation of a written protest before the breaking up of the board at the close of the fair.

The committee are of the opinion that Messrs. J. S. Rowell and Ira Rowell can not now claim, as a matter of right, first money for their mare "Badger Girl."

JNO. L. MITCHELL,
*Chairman.*
N. W. DEAN,
J. T. KINGSTON.

---

The communication of G. Lawrence, Jr., representing the Southern Wisconsin Sheep-Breeders' and Wool-Growers' Association, was referred to a committee of three, Messrs. Dousman, Boyce, and Cooper, who made report, recommending that it be incorporated in the proceedings of the executive board.

Report adopted.

"*Mr. President and Gentlemen of the Wisconsin State Agricultural Society:*

"On behalf of the Southern Wisconsin Sheep-Breeders' and Wool-Growers' Association, I beg to present a few suggestions for your consideration.

"The breeding of merino sheep in the State is assuming considerable magnitude, and attracting much attention both at home and abroad.

"Our aim is to keep up this interest, stimulate improvement, and place Wisconsin in the front rank as a sheep-breeding and wool-growing State. Breeding is a science, and the nearer we attain perfection, the slower the progress; and hence, the need of more careful and judicious crossing.

"While Wisconsin may not be advanced enough to carry off the prize in sheep-husbandry at the coming Centennial Exposition, yet we believe it would be well to make a showing to the world of what Wisconsin is doing in this important branch of stock-growing.

Digitized by Google

"We offer the following resolutions for the consideration of the board:

"*Resolved*, That alterations or improvements should be made in the pens or sheds in the sheep department at the State Fair, and we recommend that such classification or changes in the premium-list be made as shall best promote the extension of sheep-husbandry.

"*Resolved*, That we recommend that three premiums be offered for the best three rams and their scoured fleeces, shown together, and three premiums for the best pen of three ewes and their scoured fleeces, shown together; also, three prizes for the three best essays on sheep-breeding and wool-growing, the same to be read before the State Agricultural Convention in 1877.

"G. LAWRENCE, JR."

---

Class 5, "Jacks and Mules," was stricken out of the premium-list.

Class 9, "Horses for speed," amended so as to read as follows:

*WEDNESDAY, September 13*—Premium $700, 3-minute purse; $400 to first, $200 to second, and $100 to third. 2:40 purse, $700; $400 to first, $200 to second, and $100 to third.

*THURSDAY, September 14.*—Free for all trotters, $700; $400 to first, $200 to second, and $100 to third. 2:50 purse, $700; $400 to first, $200 to second, and $100 to third.

Conditions, &c., as in list of 1875.

Ex-President Hinkley, came before the board on behalf of the Wisconsin State Dairymens' Association, and made brief remarks relating to the butter and cheese interests of the State.

He asked that the same premiums be offered for butter and cheese as in 1875.

On motion, the request was granted.

Adjourned to 2 p. m.

---

AFTERNOON SESSION.

Testimony in the case of Vice-President Clark against Ex-Governor Taylor was presented by Vice-President Bryant, chairman of the committee; and, on motion, the time for hearing the arguments was fixed for Thursday, February 3, at 2 p. m.

Digitized by Google

Superintendents were appointed as follows:

DEPARTMENT A.—Horses, H. C. McDowell.
DEPARTMENT B.—Cattle, Geo. E. Bryant.
DEPARTMENTS C AND D.—Sheep and Swine, A. A. Boyce.
DEPARTMENT E.—Poultry, N. W. Dean.
DEPARTMENT F.—Agriculture, C. L. Martin.
DEPARTMENT H.—Machinery, R. D. Torrey.
DEPARTMENT I.—Manufactures, Satterlee Clark.
DEPARTMENT J.—Fine Arts, E. J. Cooper.
DEPARTMENT K.—Natural History, J. T. Kingston.
Superintendent of Forage—Geo. E. Bryant.
Superintendent of Gates—N. D. Fratt.
Marshal—J. H. Warren.

Premium-list revised until 6 p. m., when, on motion, the board adjourned until 9 a. m., Thursday.

---

*THURSDAY, 9 A. M., February 3.*

Board met, President Stilson in the chair.

Quorum present.

Secretary Field stated that a desire had been expressed by the State Horticultural Society to hold the State Agricultural Convention under the joint auspices of the State Agricultural and State Horticultural Societies. He favored such action and thought if the board would amend its by-laws, so as to meet Monday instead of Tuesday, the executive board meeting and convention could be held in one week. He therefore moved that section three, of the by-laws, be amended, by adding in the first sub-division, between "on" and "the," in the second line "Monday preceding," which makes the meeting, Monday preceding the first Tuesday in February.

The motion prevailed unanimously.

On motion the superintendents were authorized to appoint suitable persons to act as judges in their respective departments and notify them of such appointment.

Department H.—"Machinery," amended by awarding premiums on certain classes of machinery, not to exceed in the aggregate $200, and divided into two classes, operative and other heavy machinery, and field or agricultural machinery.

President Stickney of the Horticultural Society came before the board and made brief remarks relative to the financial condition of

Digitized by Google

the society, and the premiums they contemplated making the present year, and hoped the liberal appropriations made by the board in 1875, would be continued in 1876.

On motion the sum of $800 was voted to the Horticultural Society, conditioned that $2,000 be appropriated by the State to this Society.

Vice-President Dousman moved that Vice-President Bryant be appointed as custodian of the Fair Grounds of the Society.

Mr. Dean moved to add the names of Matt. Anderson, president of the Dane County Agricultural Society, and Secretary Field of this Society, which was agreed to, and the motion was then adopted.

On motion of Vice-President Bryant, it was resolved that the pedigree of all animals competing for premiums in the Short-Horn, Devon, Ayrshire, and Jersey classes be furnished the superintendent of the cattle-department, before premiums can be awarded. If the animal is recorded, the name of the herd-book, volume, and number, must be given. If not recorded, a certificate must be furnished of acceptance for record.

First and second herd-premiums were offered on each of the above classes.

Adjourned to 2 p. m.

---

AFTERNOON SESSION.

Vice-President Clark moved that the vote appointing a committee to take charge of the Fair Grounds be reconsidered. Carried.

Mr. Clark then moved to amend the motion by inserting the name of Geo. C. Russell, secretary of the Dane County Agricultural Society, in place of the president, Hon. Matt Anderson, which prevailed, and the motion was then adopted.

On motion, the pay of assistant superintendents, including clerks, ticket-sellers, and gate-keepers, but not including assistant treasurer and assistant secretary, were fixed at $3.50 per day, night-watchmen $2.50, and laborers $2.00.

Case of Vice-President Clark, against Ex-Governor Taylor, taken up.

Testimony taken by the committee read, and arguments were submitted by Hon. S. U. Pinney and Vice-President Clark. Brief remarks were also make by Ex-Governor Taylor.

Digitized by Google

At the conclusion of the arguments, Dr. Martin offered the following resolution:

*Resolved*, That Mr. Clark have permission to withdraw the charges against Ex-Governor Taylor.

Vice-President Dousman offered two resolutions as follows:

*Resolved*, That charge No. 1, as laid, is proved.

*Resolved*, That charge No. 2, as laid, is proved.

Vice-President Kingston moved, as a substitute for the resolutions that the charges be taken up and voted upon in their order, as he desired a division of the question on the first charge: 1st, as to a violation of the rules; and 2d, as to pecuniary loss to the Society resulting therefrom.

The substitute was adopted, and a vote taken; first, upon a violation of the rules; second, upon pecuniary loss in consequence of such violation; and third, upon the second charge, with results in their order as follows:

1*st*—Ayes—Messrs. Stilson, Dousman, Thorp, Kingston, Fratt, Cooper, and Stevenson—7.

Nays—Messrs. Bryant, Mitchell, Torrey, Blair, Martin, Boyce, Dean, and Field—8.

2*nd*—Ayes—Messrs. Stilson, Dousman, and Cooper—3.

Nays—Messrs. Bryant, Mitchell, Torrey, Thorp, Kingston, Blair, Martin, Boyce, Fratt, Stevenson, Dean, and Field—12.

3*d*—Ayes—Messrs. Dousman and Cooper—2.

Nays—Messrs. Stilson, Bryant, Mitchell, Torrey, Blair, Martin, Boyce, Fratt, Stevenson, Dean, and Field—11.

On motion adjourned *sine die*.

---

## SOCIETY MEETINGS—ELECTION OF OFFICERS.

CITY HALL, MILWAUKEE,
*September 9, 1875.*

In conformity to legal notice given by the Secretary, and as required by the constitution of the Society, the life-members of the Wisconsin State Agricultural Society, convened in the City Hall, by the courtesy and kindness of the mayor and city council, at 8 o'clock p. m., to elect officers of the Society for 1876.

Digitized by Google

President Stilson in the chair.

After calling the meeting to order, the president stated that the object for which the Society was convened, was the election of officers for the ensuing year, and such other business as might legally come before it under the provisions of the constitution. Said he hoped the action of the meeting would be harmonious, and that the persons elected to fill the responsible offices would be men who had the best interests of the society in view, and who believed the Wisconsin State Agricultural Society was one of the great agencies for the advancement of the industrial interests of the State, and who were willing to devote their energies in promoting its welfare and making it a greater power for the advancement of all the State's material interests.

Hon. E. W. Keyes, of Madison, moved that the present officers of the Wisconsin State Agricultural Society be nominated for the ensuing year by acclamation. In support of this motion, Mr. Keyes stated that it did not seem necessary to take up the time of the meeting by an election by ballot, or by the appointment of a committee to recommend the names of suitable persons to fill the various offices. He believed the life-members had no desire to make any change at this time; that each and every officer had discharged his duty honestly, faithfully, and efficiently, and he believed that the best interests of the Society would be subserved by their re-election.

Dr. O. W. Wight said it gave him great pleasure to second the motion of that eminent agriculturist, Hon. E. W. Keyes, and that the services rendered by the present officers of the Society, in the interest of agriculture and the kindred arts, had been appreciated by the members, and there was a disposition to let "well enough alone." He hoped the motion would prevail.

The motion was unanimously adopted, and the President declared the present officers of the Society re-elected for the year 1876, as follows:

*President*—Eli Stilson, Winnebago County.

*Vice-Presidents:*

1*st* *Congressional District*—T. C. Dousman, Waukesha County.
2*d* " " Geo. E. Bryant, Dane County.
3*d* " " J. H. Warren, Green County.
4*th* " " J. L. Mitchell, Milwaukee County.
5*th* " " Satterlee Clark, Dodge County.

Digitized by Google

*6th Congressional District*—R. D. Torrey, Winnebago County.
*7th* " " J. G. Thorpe, Eau Claire County.
*8th* " " J. T. Kingston, Juneau County.

*Secretary*—W. W. Field, Grant County.

*Treasurer*—F. J. Blair, Milwaukee County.

*Additional Members of the Executive Committee:*

C. L. Martin, Rock county.
A. A. Boyce, Columbia county.
E. J. Cooper, Iowa county.
N. S. Green, Jefferson county.
N. D. Fratt, Racine county.
Isaac Stevenson, Oconto county.
N. W. Dean, Dane county.

Secretary Field read the following amendments to the constitution, as required by that instrument, said amendments having been submitted at the annual meeting of the Society December 2, 1874.

Amend article six of the constitution, entitled, "of amendments," by adding the following to said article: "All amendments proposed shall be subject to amendment by a majority vote at the meeting when presented, but not thereafter.

Respectfully submitted.

SIMEON MILLS.

Amend article three of the constitution, entitled, "of amendments," so that it shall read as follows: The officers of the Society shall consist of a president, two vice-presidents, a secretary, a treasurer, and one additional member from each congressional district of the State, who shall hold their respective offices for the term of one year from the first day of January succeeding the date of their election, and until their successors shall have been elected, and all of whom, together with the ex-president, latest in office, shall constitute the executive board.

Very respectfully submitted,

J. O. EATON.

No further business being presented, on motion of S. D. Carpenter, the board adjourned *sine die*.

---

## ANNUAL MEETING.

STATE AGRICULTURAL ROOMS,
*MADISON, December 1, 1875.*

In conformity to the constitutional requirement, the Society met in their rooms in the Capitol at 3 o'clock, p. m.

Digitized by Google

President Stilson in the chair.

Quorum present.

After calling the Society to order, the President stated that this was the annual meeting, fixed by the constitution for the transaction of general business; that the Treasurer's report would be submitted, and such other business as could legally come before it.

F. J. Blair, Treasurer of the Society, then presented his report, which had been acted upon and approved by the executive board at its session November 30, 1875, showing the financial condition of the Society for the last fiscal year, as follows:

REPORT OF THE TREASURER.

*To the Executive Board of the Wisconsin State Agricultural Society:*

GENTLEMEN:—The financial transactions of the Society for the year ending December 1, 1875, have been as follows:

| Receipts. | Amount. |
|---|---|
| Cash on hand December 4, 1874 | $6,744 73 |
| Cash received of State Treasurer | 2,000 00 |
| Gate-fees | 10,360 00 |
| Ground-rent | 2,616 50 |
| Entry-fees | 1,924 50 |
| Twelve life-memberships | 240 00 |
| Grain and manure sold | 89 00 |
| Advertising in premium-list of 1874 | 30 00 |
| Advertising in premium-list of 1875 | 600 00 |
| Premiums returned | 2 00 |
| Chamber of commerce, Milwaukee—Special premiums on wheat | 50 00 |
| J. F. Antisdel, proprietor Newhall House, Milwaukee, special premiums on short-horns | 70 00 |
| Messrs. Plankinton & Armour, and Layton & Co., pork-packers, Milwaukee, special premiums on swine | 100 00 |
| Messrs. George Murray, Robert Ogilvie, and R. B. Sanderson, growers of blooded stock, special premium on draft-horses | 200 00 |
| Total | 25,026 73 |
| EXPENDITURES. | |
| For premiums | $8,923 00 |
| Office expenses, including postage, expressage, and freight charges | 429 43 |
| Executive board expenses | 251 00 |
| Printing and advertising | 705 00 |
| Superintendents, marshals, and assistants | 2,060 45 |
| Clerk-service | 672 55 |
| Police, labor, and watchmen | 742 00 |
| Livery and omnibus hire | 174 00 |
| Hay, straw, and grain | 638 00 |
| Music | 170 00 |
| Expenses of power hall | 501 00 |
| Principal and interest on land | 2,103 15 |
| Salary of Secretary | 2,000 00 |
| Dinner-tickets | 695 00 |

Digitized by Google

*Report of treasurer*—Continued.

| EXPENDITURES—Continued. | |
|---|---|
| Medals and diplomas | $165 00 |
| Agricultural convention | 125 00 |
| Miscellaneous, including orders No. 14, 42, 52, 69, 72, 73, 85, 94, 127, 141, 145, 183, 189, 191, 232, 272, 307, 308, 321, 326, 342, 344, 352, 359, 366, 405, 428, 429, 439, and 440 | 912 08 |
| Total | 21,266 66 |
| Balance on hand | 3,760 07 |

Very respectfully submitted.

F. J. BLAIR, *Treasurer.*

STATE AGRICULTURAL ROOMS,
*MADISON, December 1, 1875.*

---

Mr. Boyce moved that a committee of three be appointed by the chair, a majority of whom should not be members of the executive board, to examine the treasurer's report.

Which motion prevailed, and the chair appointed as such committee Messrs. Ex-President B. R. Hinkley, J. H. Warren, and H. A. Tenney, who after some time spent in an examination submitted the following report:

The undersigned committee appointed to examine and compare the vouchers of the Secretary and Treasurer, having performed that duty, herewith report that we find the same correct and that the receipts including cash on hand December 4, 1874, $6,744,73, were, during the year, from all sources $25,026.73; total disbursements $21,266.66; amount on hand $3,760.07.

All of which is respectfully submitted.

B. R. HINKLEY.
J. W. WARREN.
H. A. TENNEY.

---

On motion the report was unanimously adopted.

An amendment to article six, of the constitution, submitted at the annual meeting in December, 1874, by Simeon Mills, and which was recorded in the minutes of said meeting, and read by the Secretary at the annual meeting for the election of officers in September, 1875, was on motion adopted.

An amendment to article three, of the constitution, submitted by J. O. Eaton at the annual meeting in December, 1874, was, on motion, laid upon the table.

No further business appearing, on motion, the Society adjourned *sine die.*

Digitized by Google

# WARRANT-ACCOUNT OF THE SECRETARY.

*Number of orders issued for the year ending December 1, 1874, the amount and object of each, and the name of the person to whom issued.*

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 1 | J. P. McPherson, general work | $9 00 |
| 2 | J. S. Farrington & Son, use of furniture | 20 50 |
| 3 | W. W. Field, expenses of speakers at State Fair | 19 50 |
| 4 | American Express Company, expressage | 80 |
| 5 | G. H. Lamberton, premium | 2 00 |
| 6 | Rufus Cheney, expenses executive meeting | 16 00 |
| 7 | Sat. Clark, expenses executive meeting | 10 00 |
| 8 | Geo. A. Bruen, interest on mortgage | 136 50 |
| 9 | Martin Robinson, premium | 12 00 |
| 10 | E. W. Keyes, paper-wrappers and postal-cards | 15 00 |
| 11 | United States Company, expressage | 1 00 |
| 12 | David Hollinger, premium | 5 00 |
| 13 | S. A. Tenny, premium | 6 00 |
| 14 | T. W. Rice, premium | 2 00 |
| 15 | D. P. Webster, premium | 5 60 |
| 16 | Park, Smitt & Co., premium | 15 00 |
| 17 | American Express Company, expressage | 8 00 |
| 18 | Wm. J. Park & Co., stationery | 15 72 |
| 19 | D. M. Aspinwall, premium | 5 00 |
| 20 | E. W. Keyes, postage-stamps | 15 00 |
| 21 | H. W. Goodrich, premium | 3 00 |
| 21½ | J. N. Smitt, premium | 30 00 |
| 22 | Mark Dresser, premium | 4 00 |
| 23 | Dane County Agricultural Society, advertising | 10 00 |
| 24 | American Express Company, expressage | 40 |
| 25 | E. W. Keyes, postage | 2 58 |
| 26 | Curtiss Mann, expenses executive meeting | 12 00 |
| 27 | Sat. Clark, expenses executive meeting | 14 80 |
| 28 | Rufus Cheney, expenses executive meeting | 18 50 |
| 29 | J. O. Eaton, expenses executive meeting | 5 35 |
| 30 | Eli Stilson, expenses executive meeting | 14 85 |
| 31 | B. R. Hinckley, expenses executive meeting | 15 00 |
| 32 | N. D. Fratt, expenses executive meeting | 18 30 |
| 33 | W. E. Flagg, expenses to attend agricultural convention | 35 00 |
| 34 | F. S. Lawrence, premium | 19 50 |
| 35 | C. L. Martin, expenses executive meeting | 10 00 |
| 36 | Geo. E. Bryant, expenses executive meeting | 4 50 |
| 37 | James H. Walker, premium | 5 00 |
| 38 | Joseph T. Henry, freight on books to American Institute | 9 80 |
| 39 | E. W. Keyes, stamped envelopes | 17 10 |
| 40 | American Express Company, expressage | 20 00 |
| 41 | W. W. Field, salary | 500 00 |
| 42 | W. W. Field, clerk-hire | 75 00 |
| 43 | E. W. Keyes, wrappers and postal-cards | 17 28 |
| 44 | W. W. Field, salary | 500 00 |
| 45 | E. W. Keyes, box-rent | 3 83 |
| 46 | Edward Searing, Webster's Dictionary | 8 00 |
| 47 | Hamilton S. Wicks, reporting at agricultural convention | 10 00 |
| 48 | E. W. Keyes, wrappers and postage-stamps | 20 00 |
| 49 | W. W. Field, clerk-hire | 75 00 |
| 50 | American Express Company, expressage | 2 20 |



Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 51 | Democrat Company, printing | $15 50 |
| 52 | Geo. A. Bruen, interest on mortgage | 136 50 |
| 53 | American Express Company, expressage | 3 00 |
| 54 | Milwaukee News Company, printing | 304 44 |
| 55 | W. W. Field, expense account | 96 54 |
| 56 | M. J. Cantwell, printing | 17 50 |
| 57 | American Express Company, expressage | 2 95 |
| 58 | United States Express Company, expressage | 1 00 |
| 59 | W. W. Field, salary | 500 00 |
| 60 | E. W. Keyes, postage stamps | 85 11 |
| 61 | E. W. Keyes, postage stamps | 20 00 |
| 62 | American Express Company, expressage | 45 05 |
| 63 | Morrow Bros., advertising | 30 00 |
| 64 | B. W. Suckow, class-books | 12 70 |
| 65 | W. J. Sullivan, rosettes and ribbon | 19 91 |
| 66 | E. W. Keyes, postage stamps | 15 00 |
| 67 | H. F. Jennings, premium | 60 00 |
| 68 | T. S. Capron, premium | 28 00 |
| 69 | G. S. Haskell & Co., premium | 45 00 |
| 70 | C. H. Greenman, premium | 35 00 |
| 71 | G. V. D. Brand, premium | 10 00 |
| 72 | Allen Porter, premium | 10 00 |
| 73 | David Smith, general work | 6 00 |
| 74 | D. H. Cheney, clerk-service | 32 00 |
| 75 | Rufus Cheney, superintendent | 97 35 |
| 76 | Wm. Lyon, general work | 10 50 |
| 77 | Order destroyed | ..... |
| 78 | Order dertroyed | ..... |
| 79 | O. S. Willey, superintendent | 32 00 |
| 80 | Wm. H. Bell, assistant superintendent | 30 00 |
| 81 | J. O. Eaton, superintendent | 50 00 |
| 82 | Geo. W. Wylie, assistant marshal | 36 00 |
| 83 | E. Dakely, watchman | 6 00 |
| 84 | J. E. Cooper, superintendent | 30 00 |
| 85 | A. E. Foote, lettering, painting, &c | 27 00 |
| 86 | Sat. Clark, superintendent | 65 00 |
| 87 | A. C. Peasley, assistant superintendent | 24 00 |
| 88 | G. H. Daubner, premium | 55 00 |
| 89 | James Baker, assistant superintendent | 24 00 |
| 90 | H. R. Clark, assistant superintendent | 30 00 |
| 91 | Thomas Higgins, assistant superintendent | 24 00 |
| 92 | H. Lake, assistant superintendent | 24 00 |
| 93 | M. Garvin, assistant superintendent | 24 00 |
| 94 | A. E. Chase, assistant superintendent | 24 00 |
| 95 | B. R. Hinkley, assisting president | 25 00 |
| 96 | H. Phillips, premium | 10 00 |
| 97 | E. P. Richardson, assistant superintendent | 26 00 |
| 98 | C. L. Martin, superintendent | 30 00 |
| 99 | J. W. Baker, assistant superintendent | 26 00 |
| 100 | D. S. Harkness, printing | 10 00 |
| 101 | D. Huntley, premium | 49 00 |
| 102 | Grand Chute F. Club, premium | 10 00 |
| 103 | H. M Jones, premium | 5 00 |
| 104 | A. H. Hart, premium | 20 00 |
| 105 | D. H. McArthur, ticket-accountant | 40 00 |
| 106 | P. Brooks, premium | 30 00 |
| 107 | Wm. Welch, watchman | 18 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 108 | Louis Breesee, assistant superintendent | $12 00 |
| 109 | L. Barrett, assistant superintendent | 20 00 |
| 110 | R. R. Fellows, assistant superintendent | 20 00 |
| 111 | W. H. Seaver, assistant superintendent | 20 00 |
| 112 | James Stryker, assistant superintendent | 20 00 |
| 113 | James Cooper, assistant superintendent | 20 00 |
| 114 | Fred. Perkins, assistant superintendent | 20 00 |
| 115 | Wm. Dodge, assistant superintendent | 16 00 |
| 116 | C. D. Ellarson, assistant superintendent | 20 00 |
| 117 | Peter Onnell, assistant superintendent | 20 00 |
| 118 | A. J. Robertson, assistant superintendent | 20 00 |
| 119 | Jennie Field, clerk-service | 40 00 |
| 120 | Nettie Jones, clerk-service | 40 00 |
| 121 | H. A. Grere, assistant superintendent | 20 00 |
| 122 | Isaac Charnley, assistant superintendent | 20 00 |
| 123 | N. D. Fratt, superintendent | 30 00 |
| 124 | Robert Anderson, clerk-service | 30 00 |
| 125 | S. D. Carpenter, services in superintendent's department | 25 00 |
| 126 | E. Herzer, shavings | 7 50 |
| 127 | J. L. Mitchell, superintendent | 30 00 |
| 128 | H. C. Crandall, service in superintendent's department | 9 00 |
| 129 | S. Levitt, watchman | 12 00 |
| 130 | Frank Warren, general work | 15 00 |
| 131 | J. G. Calkins and Son, general work | 21 00 |
| 132 | Wm. Rhodes, premium | 115 00 |
| 133 | Wm. Reed, premium | 80 00 |
| 134 | Geo. Wall, premium | 20 00 |
| 135 | E. W. Palmer, police | 15 00 |
| 136 | Therese Karzke, premium | 19 00 |
| 137 | Mrs. J. T. Kavanaugh, premium | 20 00 |
| 138 | E. Newcomb, premium | 6 00 |
| 139 | W. H. Davis, premium | 23 00 |
| 140 | S. Squires, premium | 2 00 |
| 141 | J. S. Rowell, premium | 300 00 |
| 142 | E. J. Grover, premium | 3 00 |
| 143 | L. Wheeler, premium | 5 00 |
| 144 | F. C. Curtiss, premium | 67 00 |
| 145 | Mrs. A. A. Bull, premium | 4 00 |
| 146 | J. C. Corrigan, premium | 235 00 |
| 147 | John Gillett, watchman | 15 00 |
| 148 | John Gillett, watchman | 9 00 |
| 149 | L. Rawson, premium | 296 00 |
| 150 | M. Loomis, premium | 30 00 |
| 151 | J. Campbell, premium | 20 00 |
| 152 | H. N. Warren, watchman | 18 00 |
| 153 | H. Ludington, watchman | 6 00 |
| 154 | H. Ludington, watchman | 12 00 |
| 155 | H. Nathan, watchman | 3 00 |
| 156 | H. Nathan, watchman | 15 00 |
| 157 | W. Friell, watchman | 15 00 |
| 158 | A. Wood, police | 18 00 |
| 159 | A. Wood, watchman | 9 00 |
| 160 | R. J. Day, watchman | 12 00 |
| 161 | W. R. Day, watchman | 12 00 |
| 162 | T. Laind, watchman | 6 00 |
| 163 | T. Laind, watchman | 15 00 |
| 164 | C. Robinson, watchman | 9 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 165 | C. Robinson, watchman | $15 00 |
| 166 | J. A. Parker, assistant superintendent | 4 50 |
| 167 | F. Zentner, watchman | 31 00 |
| 168 | E. W. Palmer, watchman | 6 00 |
| 169 | N. S. Caswell, hardware | 8 25 |
| 170 | J. A. Byrne, clerk-service | 25 00 |
| 171 | N. J. Swan, hay and straw | 735 96 |
| 172 | Sentinel Company, printing and advertising | 150 00 |
| 173 | N. S. Greene, assistant superintendent | 30 00 |
| 174 | Curtis Mann, services during fair | 30 00 |
| 175 | Daniel Williams, clerk-hire | 20 00 |
| 176 | R. T. Graves, superintendent | 25 00 |
| 177 | W. B. Leaf, assistant superintendent | 18 00 |
| 178 | A. J. High, police | 6 00 |
| 179 | B. Alcott, police | 21 00 |
| 180 | J. H. La Point, premium | 40 00 |
| 181 | G. J. Kellogg, assistant superintendent | 30 00 |
| 182 | O. W. Russell, leveling track | 20 00 |
| 183 | J. H. Warren, marshal | 62 00 |
| 184 | A. H. Swan, premium | 30 00 |
| 185 | W. D. Edgerton, premium | 54 00 |
| 186 | O. Secor, premium | 15 00 |
| 187 | H. B. Roberts, premium | 30 00 |
| 188 | B. Phelps, premium | 15 00 |
| 189 | Howard & Towers, premium | 69 00 |
| 190 | Miss Kate Peffer, premium | 50 00 |
| 191 | R. Seaver, premium | 108 00 |
| 192 | Mr. R. Davis, premium | 8 00 |
| 193 | Frank McVean, premium | 14 00 |
| 194 | T. B. Rowland, premium | 10 00 |
| 195 | S. A. Fox, premium | 70 00 |
| 196 | J. W. Wood, premium | 32 00 |
| 197 | H. N. Maxham, premium | 3 00 |
| 198 | G. J. Kellogg, premium | 58 00 |
| 199 | F. S. Lawrence, premium | 20 00 |
| 200 | Mrs. M. A. Lewis, premium | 25 00 |
| 201 | Mrs. J. W. Park, premium | 23 00 |
| 202 | Park, Smith & Co., premium | 10 00 |
| 203 | E. B. Thomas, premium | 24 50 |
| 204 | S. B. Smith, premium | 4 00 |
| 205 | P. Putnam, premium | 13 00 |
| 206 | Mrs. P. Putnam, premium | 10 00 |
| 207 | C. H. Hall, chief clerk, secretary's office | 75 00 |
| 208 | H. H. Greenman, premium | 15 00 |
| 209 | Greenman, McGraw & Day, premium | 5 00 |
| 210 | Harrison Ludington, premium | 155 00 |
| 211 | Harrison Ludington, wood | 15 00 |
| 212 | J. Stoddard, premium | 109 00 |
| 213 | O. L. Packard, premium | 50 00 |
| 214 | O. L. Packard, engine, &c., for power-hall | 121 45 |
| 215 | Gould's Nursery, premium | 63 00 |
| 216 | A. Tiebratz, premium | 20 00 |
| 217 | E. P. Richardson, premium | 3 00 |
| 218 | A. Aldrich, premium | 50 00 |
| 219 | J. M. Alcott, premium | 15 00 |
| 220 | Miss Mary Stransky, premium | 5 00 |
| 221 | Hawkins & Kruger, premium | 10 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 222 | Mrs. L. Newbour, premium | $3 00 |
| 223 | W. K. Wilson, premium | 10 00 |
| 224 | H. Frodsham, premium | 50 00 |
| 225 | N. Zimmerman, premium | 5 00 |
| 226 | Geo. Murray, premium | 505 00 |
| 227 | O. B. Fowler, premium | 20 00 |
| 228 | C. Kingsley, premium | 2 00 |
| 229 | D. H. Doran, premium | 15 00 |
| 230 | Miss Bertha Lewald, premium | 2 00 |
| 231 | Wm. Hartert, sundries for power-hall | 136 72 |
| 232 | Miss Mary Mahoney, premium | 8 00 |
| 233 | Sargent & Strong, stationery | 1 85 |
| 234 | Geo. Jeffrey, premium | 28 00 |
| 235 | E. Agnew, premium | 6 00 |
| 236 | Jas. Eager, premium | 6 00 |
| 237 | Miss Jennie Heth, premium | 7 00 |
| 238 | J. A. Bryden, oats | 65 92 |
| 239 | F. Bell, premium | 20 00 |
| 240 | Harrison & Green, sprinkling track, &c | 62 00 |
| 241 | Miss J. Lynde, premium | 4 00 |
| 242 | E. Chatfield, assistant superintendent | 13 50 |
| 243 | J. Becker, premium | 15 00 |
| 244 | Mrs. Jas. McAlpine, premium | 19 00 |
| 245 | L. Ziemer, premium | 4 00 |
| 246 | Mrs. M. L. Hendee, premium | 2 00 |
| 247 | Coe & Elliott, premium | 3 00 |
| 248 | Geo. W. Ringrose, premium | 8 00 |
| 249 | D. T. Pilgrim, premium | 63 00 |
| 250 | Farrington & Sons, premium | 12 00 |
| 251 | Wm. Kershner, drayage | 6 00 |
| 252 | Cramer, Aikens & Cramer, advertising | 3 50 |
| 253 | C. G. Bradley, premium | 40 00 |
| 254 | Mr. and Mrs. S. H. Seaman, premium | 94 00 |
| 255 | W. M. Ormond, premium | 30 00 |
| 256 | W. M. Ormond, assistant superintendent | 30 00 |
| 257 | Mrs. Henry Hickman, premium | 4 00 |
| 258 | O. M. Brown, premium | 150 00 |
| 259 | W. O. Stillman, livery | 135 00 |
| 260 | H. F. Jennings, premium | 15 00 |
| 261 | Blair & Persons, crockery and cartage | 32 69 |
| 262 | C. A. Buttles, sundries | 33 96 |
| 263 | Theo Heiss, premium | 20 00 |
| 264 | C. Hall, premium | 45 00 |
| 265 | Mrs. Fanny Wilson, premium | 4 00 |
| 266 | B. B. Olds, premium | 30 50 |
| 267 | Mrs. Alex. Mitchell, premium | 45 00 |
| 268 | J. B. Cross, premium | 5 00 |
| 269 | Aug. Wolf, premium | 5 00 |
| 270 | H. W. Roby, premium | 15 00 |
| 271 | John Dearsley, premium | 5 00 |
| 272 | H. Boorse, premium | 43 00 |
| 273 | J. F. Burchard, premium | 10 00 |
| 274 | Chas. Elson, expense account as per bill | 99 50 |
| 275 | Milwaukee News Company, printing | 24 50 |
| 276 | M. Carpenter, premium | 85 00 |
| 277 | H. McCoffney, premium | 3 00 |
| 278 | S. H. Seaman, chicken-coops broken | 9 35 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 279 | Chas. Mettos, general work | $7 50 |
| 280 | S. A. Lemon, general work | 24 00 |
| 281 | W. A. Henwood, police | 5 00 |
| 282 | Monroe Cornet Band, music | 125 00 |
| 283 | Will Bates, clerk-service | 35 00 |
| 284 | J. H. Balch, clerk-service | 45 00 |
| 285 | R. R. Cheney, clerk-service | 35 00 |
| 286 | Mrs F. M. Vilas, clerk-service | 30 00 |
| 287 | J. H. Ray, police | 15 00 |
| 288 | J. C. Otis, general work | 18 00 |
| 289 | Aug. Belten, general work | 3 50 |
| 290 | Percy Stone, clerk-service | 25 00 |
| 291 | A. H. Main, chief clerk Treasurer's office | 60 00 |
| 292 | H. F. Atwood, clerk-service | 20 00 |
| 293 | Allie H. Bird, clerk-service | 15 00 |
| 294 | F. F. Adams, premium | 10 00 |
| 295 | S. P. White clerk-service | 25 00 |
| 296 | V. A. Henwood, clerk-service | 20 00 |
| 297 | W. E. Main, clerk-service | 30 00 |
| 298 | E. S. Bean, clerk-service | 30 00 |
| 299 | James Parker, clerk-service | 15 00 |
| 300 | J. J. Norton, clerk-service | 25 00 |
| 301 | H. F. Dixon, clerk-service | 25 00 |
| 302 | H. Sylvester, clerk-service | 15 00 |
| 303 | J. L. Mitchell, premium | 30 00 |
| 304 | Eli Stilson, expense account as President | 96 55 |
| 305 | Eli Stilson, per diem services as President | 145 00 |
| 306 | S. M. Hammond, clerk-service | 30 00 |
| 307 | Eli Stilson, premium | 150 00 |
| 308 | William Story, premium | 20 00 |
| 309 | Mrs. H. M. Tones, premium | 7 00 |
| 310 | E. M. DePuy, premium | 3 00 |
| 311 | Emily T. Smith, premium | 28 00 |
| 312 | T. O. Wisner, superintendent | 54 65 |
| 313 | W. W. Field, expense account | 42 70 |
| 314 | Mrs. E. Foreman, premium | 4 00 |
| 315 | W. H. Cottrill, board, by order of Society | 44 50 |
| 316 | Parks & McLaughlin, posting bills | 2 00 |
| 317 | H. W. Roby, assistant superintendent | 42 50 |
| 318 | Berthelet & Co., premium | 3 00 |
| 319 | Not issued | ..... |
| 320 | Wm. Beck, chief of police, service | 50 00 |
| 321 | Wm. Kitzrow, premium | 80 00 |
| 322 | George D. Doubleday, premium | 60 00 |
| 323 | Peter Dany, premium | 60 00 |
| 324 | James Barr, premium | 10 00 |
| 325 | H. Newnham, assistant superintendent | 20 00 |
| 326 | Miss M. Newnham, premium | 5 00 |
| 327 | James Magson, premium | 60 00 |
| 328 | M. Realey, police | 21 00 |
| 329 | W. Jeffers, police | 12 00 |
| 330 | W. A. Jeffers, police | 12 00 |
| 331 | H. Poal, police | 15 00 |
| 332 | Wm. Ream, police | 15 00 |
| 333 | W. F. Smith, premium | 16 00 |
| 334 | John H. Paul, premium | 100 00 |
| 335 | E. and J. Smith, premium | 196 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 336 | George P. Peffer, premium | $73 00 |
| 337 | Jacob DeGraff, premium | 7 00 |
| 338 | J. Johnson, premium | 56 00 |
| 339 | C. M. Warren, general work | 12 00 |
| 340 | Wm. R. Warren, police | 15 00 |
| 341 | George E. Bryant, premium | 80 00 |
| 342 | George E. Bryant, superintendent | 50 00 |
| 343 | M. J. Cantwell, tickets and printing | 27 50 |
| 344 | Mrs. P. Yale, premium | 6 00 |
| 345 | Wm. Kitzrow, premium | 5 00 |
| 346 | Samuel H. Watson, assistant superintendent | 20 00 |
| 347 | Filer, Stowell & Co., premium | 25 00 |
| 348 | Chester Hazen, premium | 95 00 |
| 349 | E. W. Keyes, stamped envelopes | 17 10 |
| 350 | Peter Keysinnick, general work | 24 00 |
| 351 | A. F. Pratt, premium | 30 00 |
| 352 | R. Richards, premium | 145 00 |
| 353 | Kirby & Jones, premium | 3 00 |
| 354 | M. Cosgrove, hardware | 3 00 |
| 355 | Chas. Halborn, premium | 30 00 |
| 356 | Wm. Lysaght, premium | 99 00 |
| 357 | R. Ogilvie, premium | 43 00 |
| 358 | John M Roberts, premium | 5 00 |
| 359 | Wm. Warden, premium | 50 00 |
| 360 | Leon Howard, premium | 6 00 |
| 361 | Sentinal Printing Company, advertising | 10 00 |
| 362 | Geo. Harding, premium | 25 00 |
| 363 | A. Middlemas, premium | 10 00 |
| 364 | Myers & Son, premium | 2 00 |
| 365 | H. M. Thompson, premium | 7 00 |
| 366 | John Jeffreys, premium | 35 00 |
| 367 | C. C. Hatchard, premium | 7 00 |
| 368 | J. C. Plumb, premium | 5 00 |
| 369 | S. S. Hills, use of hay-scales | 25 00 |
| 370 | S. S. Hills, assistant superintendent | 44 00 |
| 371 | American Express Company, expressage | 16 00 |
| 372 | S. A. Philbrook, premium | 7 00 |
| 373 | Geo. Lawrence, Jr., premium | 60 00 |
| 374 | A. G. Tuttle, premium | 69 50 |
| 375 | S. B. Smith, premium | 2 00 |
| 376 | Jos. Ray, police | 12 00 |
| 377 | E J. Lindsay, premium | 25 00 |
| 378 | H. B. Sherman, premium | 99 00 |
| 379 | Mrs. S. Bell, premium | 8 00 |
| 380 | Mrs. Thomas Irving, premium | 5 00 |
| 381 | Miss Kate Peffer, premium | 4 00 |
| 382 | E. Elliot, premium | 5 00 |
| 383 | T. Heiss, premium | 10 00 |
| 384 | United States Express Company, expressage | 4 30 |
| 385 | Robert Monteith, filling diplomas | 2 50 |
| 386 | Mrs. A. H. Cutting, premium | 10 00 |
| 387 | Johnson & Jones, premium | 2 00 |
| 388 | F. Jones, premium | 10 00 |
| 389 | Geo. W. Cann, premium | 10 00 |
| 390 | G. Simmons, premium | 10 00 |
| 391 | Peter Davy, premium | 20 00 |
| 392 | Roberts & Davis, drayage | 12 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 393 | Samuel A. Randles, premium | $10 00 |
| 394 | Mrs. M. A. Lewis, premium | 1 00 |
| 395 | J. S. McGowen, services for superintendent | 12 00 |
| 396 | M. L. Butterfield, premium | 35 00 |
| 397 | Thomas Irving, premium | 30 00 |
| 398 | W. W. Ellsworth, premium | 189 00 |
| 399 | Perry Craig, premium | 25 00 |
| 400 | Mrs. H. Russell, premium | 1 00 |
| 401 | W. W. Field, salary | 500 00 |
| 402 | James McNee, premium | 10 00 |
| 403 | J. Ozanne, premium | 25 00 |
| 404 | J. G. Putman, premium | 10 00 |
| 405 | H. O. Bayley, premium | 4 00 |
| 406 | J. C. Mitchem, premium | 5 00 |
| 407 | Foster & Fowler, premium | 5 00 |
| 408 | R. S. Houston, premium | 40 00 |
| 409 | Julius Vogel, rollers | 6 00 |
| 410 | Miss L. Tenny, premium | 2 00 |
| 411 | Morrow & Bro., 11 copies Western Farmer | 22 00 |
| 412 | Mayhew Bros., lumber | 20 91 |
| 413 | E. B. Thomas, premium | 3 00 |
| 414 | W. W. Field, expense-account | 83 80 |
| 415 | Wm. J. Park & Co., stationery | 25 24 |
| 416 | Miss Lillie Webster, premium | 2 00 |
| 417 | I. P. Chapin, premium | 13 00 |
| 418 | Jacob Hill, premium | 5 00 |
| 419 | Miss B. Day, premium | 3 00 |
| 420 | Henry Lamb, premium | 5 00 |
| 421 | E. W. Keyes, postage and box-rent | 3 75 |
| 422 | Allen Stetson, premium | 25 00 |
| 423 | W. F. Whitney, premium | 10 00 |
| 424 | Griffith Richards, premium | 4 00 |
| 425 | Fleck & Schwab, use of tables and chairs | 9 00 |
| 426 | Mrs. H. G. Roberts, premium | 2 00 |
| 427 | Bloedel & Mueller, medals | 97 85 |
| 428 | Mrs. Fannie M. Vilas, premium | 3 00 |
| 429 | American Express Company, expressage | 3 35 |
| 430 | Democratic Campany, printing | 11 50 |
| 431 | E. W. Keyes, postal-cards | 10 00 |
| 432 | R. S. Houston, premium | 10 00 |
| 433 | A. & P. Humbert, premium | 58 00 |
| 434 | Medbury, Stevens & Co., premium | 10 00 |
| 435 | Matthew Bros. & Co., sundries | 9 75 |
| 436 | W. W. Daniells, expenses at State Fair | 5 00 |
| 437 | Stickney, Baumbach & Gilbert, premium | 15 00 |
| 438 | A. Rorick, premium | 5 00 |
| 439 | C. A. Buttles, premium | 3 00 |
| 440 | Geo. P. Peffer, premium | 2 00 |
| 441 | Atwood & Culver, printing | 53 00 |
| 442 | R. Hughes, premium | 20 00 |
| 443 | United States Express Company, expressage | 3 65 |
| 444 | Geo. A. Bruen, interest on mortgage | 136 50 |
| 445 | Peterman & Stredy, ladder | 6 00 |
| 446 | Dinner-tickets | 754 50 |
| 447 | F. J. Blair, expense at December and February meetings | 26 00 |
| 448 | F. J. Blair, coal | 1 01 |
| 449 | F. J. Blair, counterfeit money taken during the fair | 15 00 |

Digitized by Google

*Warrant-account of the Secretary*—Continued.

| No. | To whom and for what issued. | Amount. |
|---|---|---|
| 450 | F. J. Blair, service during State Fair..... | $35 00 |
| | Total amount of orders issued by the Secretary..... | 16,994 30 |
| | Amount of orders Nos. 314, 319, 351, 381, 390, 392, and 393, of 1873, paid by the Treasurer..... ..... | 87 50 |
| | Total..... | 17,081 80 |
| | Amount of orders Nos. 164, 165, 400, 426, 428, 432, 442, 443, and 445, of 1874, not received by the Treasurer at the close of the year, December 1, 1874..... | 69 65 |
| | Total amount of orders paid by the Treasurer..... | 17,012 15 |

Digitized by Google

# EXHIBITION OF 1875.

## OPENING ADDRESS.

BY ELI STILSON, PRESIDENT.

*Fellow citizens, and members of the State Agricultural Society:*

We have assembled here to-day to formally open our twenty-second annual exhibition of the Society. The circumstances surrounding are generally of a favorable character. The present season has generally been favorable to the Wisconsin farmer. Under the blessings of Divine Providence the earth has brought forth of her abundance and the farmer has gathered in his stores and will now turn his attention to our annual State Fair. These annual exhibitions have become not only highly entertaining, but also highly educational to our intelligent agricultural population.

They are periods that are looked forward to with pleasure, and call together far greater masses of the intelligent than any other kind of gathering in the State. If they have become so powerful in their influence, how necessary it is that they be guided by counsel and managed with a view to usefulness and instructiveness. Those State fairs that have made amusements the primary object, and usefulness the secondary, have had very fitful and uncertain exhibitions—not so with those who have made the useful the primary object and amusement secondary—with such their march has been ever onward and upward, and they stand out in bold relief as beacons of progress and success.

Fairs were instituted that the products, manufactured articles, and implements of individual localities may be compared, examined, and studied, that progress and improvements may be noted and adopted by the intelligent farmer, stock-breeder, manufacturer, and artist. Amusements are appropriate in their proper place and

Digitized by Google

time, and may be so blended with our gatherings as to enliven and give rest to the more useful.

Let us turn our attention to the exhibition before us. The horse-department is filled with choice specimens—some noted for speed; others are adapted to road-purposes particularly, and others for general purposes, while the draught-horse comes in for his full share of praise and honors. The progress that has been made in the improvement of the horses of this State in the last few years is truly wonderful.

### CATTLE-DEPARTMENT.

The long rows of stalls filled with the choicest cattle of the State, are the best evidence of the progress that has been made in this department. From the diminutive Jerseys to the stately Short-Horns, all the different breeds have produced many animals of superior merit and show the progress made in breeding improved stock. They are convincing proofs of what can be done in stock-raising, and be done with far greater profit than the raising of scrub stock. And the farmer of to-day who fails to improve his stock, fails to comprehend his own interests and his surest road to success. The breeder who moulds and fashions our domestic animals until they are objects of beauty, symmetry, and usefulness is a far greater benefactor than the great politicians of the age. The great works of art are but imitations of life, while the works of the artist and scientific breeder are life itself in its most useful and beautiful form. The names of Bakewell, Booth, and Bates, will live long after the names of the great politicians of the day shall have been dimmed by the vista of future years.

### SHEEP-DEPARTMENT.

This part of the fair is full to overflowing. Here again we see the handiwork of the breeder, each breed being bred for a particular purpose, and how nice each is adapted to the purpose for which they were grown. The man who should attempt to make broadcloth or cassimeres, or other fine goods out of the wool of the Cottswold sheep would surely fail; so with the combing-wools and delaine-wools; each has its particular purpose.

Digitized by Google

### SWINE.

We are aware that to many this is not an interesting part of the fair, but when we see the importance of this branch to the national exchequer, and to domestic economy, we must give it its just share of notice. No other class of domestic animals are capable of so great an improvement in so short a period of time.

### POULTRY.

A great impetus has been given to this branch of our fairs, and comparing of the specimens of the various breeds and the improved breeds are highly valuable as well as beautiful.

### OPERATIVE MACHINERY AND IMPLEMENTS.

In operative machinery our success is quite recent. It was not until after we came to this city to hold our fairs that we obtained anything like success, but now its hum is heard by the multitude, and conspicuous among all the attractions are its operations and power. The hall is constantly thronged. Implements also adapted to all the varied purposes of farm industry, and which serve to lighten the toil of the husbandman, are exhibited in countless numbers, and of the highest degree of merit.

### MANUFACTURES.

Here we find two large halls filled with the products of our industries, and in durability, superior excellence, and in adaptability to the purpose for which they were manufactured, they challenge our highest admiration and praise. Each annual State Fair appears to furnish new proof that we can not only produce, but that we can successfully manufacture, and that we possess all the elements of a rich and wealthy State; and coupled with the untiring intelligence and perseverance of our people, we have a bright future before us.

### AGRICULTURAL HALL.

Owing to the lateness of the season, as compared with the early period in which the fair is held, the success is more than the most sanguine could expect. The present season has been favorable to

Digitized by Google

general agriculture and the Wisconsin farmers will receive the reward—the reward of their labors.

We have on exhibition the largest amount of dairy-products exhibited at any fair in America, and of high excellence, and we have reason to expect great good to grow out of this part of our exhibition. The

ARTIST HAS ALSO

contributed much to the success of this exhibition. The difficulty of handling and the uncertainty of the weather and risk, render it difficult to collect a great number of the works of art of high excellence, and it has only been by persistent effort that so great success has been obtained.

HORTICULTURE

has contributed much toward the success of this and former fairs, and the horticulturist has been untiring in his efforts, and has met with a measure of success, but new obstacles have come athwart his path. Three dry seasons, followed by the most severe winter known since the settlement of Wisconsin, has caused great loss; but, nothing daunted, they will arise and repair the damages, and move on to new conquests in this particular branch, to furnish our tables not only with many of the necessaries, but also with many of the luxuries of life, and gladden our eyes with the most beautiful of plants and flowers. And last, though not the least, we should be unjust if we did not pay tribute to the ladies who have contributed so largely to the success of this and other former fairs. Ever foremost in every good work, they have contributed their full share to our success. And now we expect that every enjoyment and pleasure will be heightened by their presence and assisted by their labors in all their appropriate departments.

THE PRESS

has labored much to build up and crown this fair with success. They have taken a deep interest in the fair, and at all times have lent their aid to furthering the interests of the same.

The Centennial Exposition, at Philadelphia, in 1876, should receive due consideration at our hands. This will not only be a world's fair, but will form a grand epoch in the nation's history.

Digitized by Google

A century will have rolled around since the time when the bells of that city first poured forth on the midnight air the glad news that a republic was born; that the colonies were declared free and independent, and the signers of that declaration had pledged their lives and fortunes and sacred honors to its support. How appropriate that this exposition should take place at the very place where liberty was first cradled, and that, too, after the lapse of an hundred years the infant republic has not only become great in the extent of its territory, population, and wealth, but also great in arts, sciences, improvements, and productions. Its flag floats proudly on every sea, giving protection to all its subjects in every clime. And in many departments of production, industry, and inventive genius, and skill, we can now safely challenge the world.

The Centennial Exposition will be one of the greatest events of our day, and Wisconsin should bestir herself that justice be done to our noble State in the collective industry of States and nations. The celebration of the one hundreth birthday of the republic, whose eastward shore is laved by the waters of the Atlantic Ocean, and on the west by the grand Pacific, should be a grand jubilee befitting to the magnitude of the occasion. The bright prospect before us, blessed as our State is with a healthy climate, a rich and productive soil, vast mines of lead, iron, and copper, and vast forests of pine and other valuable timber, and with water-powers not excelled in the world; with an educated, industrious, intelligent population, our march must be onward. And Wisconsin to-day is making more substantial progress than ever before in the cultivation of her soil, improvement of her stock, and generally improved agriculture.

Let me call your attention to the absence of gambling and games of chance from our fair-grounds; yet, our rents are far in excess of what they were when such were admitted to the grounds. Our grounds are much more peaceable and orderly than they would be if such were admitted. We hope that such churches as have practised games of chance to raise money in times past will learn a salutary lesson from our agricultural society.

To the officers of the society let me say that while your duties are laborious and often trying, you will find that by a close adherence to our printed rules and regulations, you will be able to discharge your duties more satisfactory to yourself and the public, and

Digitized by Google

the long association that I have had with you and your untiring efforts in the past, all give me the highest assurances of your united support and success.

To the exhibitors, let me say that you have done nobly under such circumstances, and richly deserve all the praise that you get for your efforts in behalf of the success of the fair. But do not be satisfied to rest with your present improvements, but let progress be stamped on every future work, for there are higher and greater attainments in store for you in your several callings and occupations. To the public I will say, that the exhibition before you has been gotten up only by untiring effort and skill, and you see before you the progress that has been made in the different departments. You will find much to instruct and gratify you. You will see before you what can be done to lighten the toil; to increase the profits and to add to the wealth of the State and nation, as well as please the taste, expand the intellect, and give broader and higher views of the capacity and ability of the State. With these few brief remarks we proclaim the exhibition of 1875 now open to the public. It is yours to enjoy.

Digitized by Google

# ANNUAL ADDRESSES.

Delivered on the Fair Grounds, September 9, 1875, By Hon. GEO. W. CATE, M. C., and DAVID WARD WOOD, Esq., of the *Western Rural*, Chicago. It is to be regretted that Judge Cate's able address cannot be given in full, but as he has failed to supply the manuscript, although earnestly solicited to do so, the following brief extracts taken from the Milwaukee *News* of September 10, will give the reader a general idea of the address, which was an excellent description of money, its uses and abuses, and was listened to with interest.

## FINANCE.

BY HON. GEO. W. CATE.

The needs and wants of trade require a circulating medium far greater in volume than the amount of the stamped coin of the country, and just in proportion in all ages as the necessities or conveniences of trade has demanded, just in that proportion has this paper currency come into use and taken the place of coin. To show the magnitude of this circulating medium, it is necessary to mention that the amount of gold and silver in the world is but three per cent. of the whole amount of our currency, including coin and all kinds of paper currency. How small a fraction of the exchanges of the world demanding the offices of a circulating medium is performed by coin? Ninety-seven per cent. of paper in some form, to three per cent of coin. The legitimate and lawful currency of the country is trifling in amount when compared with those forms and descriptions of indebtedness, bills of exchange, cheques, drafts, notes, etc., that enter so largely into the transactions of the commercial world, in the place of a lawful and legalized currency, and will be resorted to just in proportion as the lawful legalized currency is scarce or plenty, equal to the demands of business, or falls below it.

Digitized by Google

But when the purchasing power for money is largely increased by reason of its scarcity, labor is less valuable, and therefore it is that while some classes may not be sensibly affected by the lessened value of the money in circulating, labor feels it most keenly. Notwithstanding this well known truth, the laboring-man takes little interest in these questions, and can hardly be made to believe that of all classes of society he is the most interested, in so shaping the finance policy of the government that the demands of business will always meet a sound circulating medium equal to its wants and thereby stimulating, not crippling industry.

Now, it seems to me that the proposed greenback will answer all the conditions imposed by the absolute wants of the country, its value an arbitrary one, fixed by the government itself, keeping in view all the time that such value may be impaired or wholly lost by a superabundant issue. But the State cannot arbitrarily fix the amount of currency that shall be in circulation without at times seriously disturbing the finances of the country; the demands of business cannot be anticipated and fixed by law, a currency equal in amount to the requirements of trade at one time might be insufficient at another time, and largely in excess at another.

We are told that there is too much in the country, and that the only hope for a speedy return to an almost forgotten prosperity lies in still further contraction of the currency, but I do not think so; but on the contrary believe, that with friendly legislation the business of the country would for the past two years have profitably employed a far greater amount of money than there was in circulation.

The present system is objectionable, because of the overshadowing influence of the combined banking capital over the government and over the country. Contemplate for a moment the vast power that two thousand national banks can exert and will exert whenever and wherever the interest of capital demands it. Said Gen. Spinner, for so many years treasurer of the United States, in a letter dated May 17, 1874, I agree with you on the propriety of preserving the greenbacks, and abolishing the bank paper money. But this is now impracticable. The banks are strong enough to rule both the government and people. The whole tendency of things is in the direction from what we would have it, and we and those who think with us can't help it. The policy now is to increase the num-



Digitized by Google

ber of banks and their circulation, and to restrict the treasury issues, and so matters will have to drift a while longer. Is it good policy to continue in force, a system under which a money power has grown up to which every industrial interest is compelled to pay tribute, a power which in virtue of the wealth it wields is able to command both the government and the country. I think not.

---

## PRODUCERS' PERILS.

BY DAVID WARD WOOD.

Nearly a hundred years have left their impress on this American nation, and gilded it with its present grandeur. A garden has been made to bloom in the midst of the wilderness, cities have arisen upon the uninviting marshes, and the hum of industry has silenced the war-whoop of the savage upon the broad prairies. The music of the spindle mingles with the song of waters which a century ago trickled from the hidden mountain-spring, and murmured through the forests which civilized man had never invaded. The glare of the smelting-furnace, sifting treasure from native rock and coining wealth from the sands of the seashore, streams out into the darkness of the night, and illumines the picture of our national progress, until we pause in bewilderment and are half incredulous as to the reality of our remarkable achievements. Penetrating our Hoosacs, spanning our Mississippi, scaling our Sierra Nevadas, woven in intricate net-work over our prairies, and uniting Maine to Mexico, and California to New England, our 60,000 miles of railroads speak loudly of our enterprise and advancement. The locomotive breathes its hot, heavy breath upon the piston-rod, and moves like a thing of life over the continent, screaming forth the claims of civilization amidst the silence of the wild woodlands and the sand-storms of the trackless plains; the white wings of our shipping shade our capacious harbors, and beat the breezes of every sea and reflect the sunlight in every port. A world discerns them as far as the eye can penetrate the azure of the ocean, and applauds the grace with which they bear to foreign lands our cotton, flour, meat, butter, hides, grain, gold, potash, tobacco, rice, and petroleum, girdling the

Digitized by Google

continent, and almost reaching into every hamlet; our 70,000 miles of telegraph flashes living thought, and simultaneously lights up the whole nation with a blaze of intelligence. America places her lips to the rocks of the seashore and whispers her wishes to all Europe, and is answered by the first wave that dashes on the beach. Our budding men and women, exceeding in numbers eleven millions, are being nurtured into strength, and beauty, and bloom, in the shadow of the school-house, and by the developing power of

OUR EXCELLENT EDUCATIONAL SYSTEM,

the pride of the nation, and in no State more perfect than in Wisconsin. Charity erects her mansions and invites poverty from the deserts to loiter among the flowers; she builds hospitals for the sick and surrounds them with all the charms which can glow from sympathy and pitying tenderness, and to the weak and tempted she opens delightful retreats where the tempter sings not, and where danger is swallowed up in victory, Thus, this people have carved greatness out of the rude rock and the wilderness, turned adversity into prosperity, adorned their nation with the loveliest of virtues, challenged the admiration of the world, and developed from a handful of fugatives into a population of forty-three million. And whence comes this glory and power and perfection? What magic wand has touched the earth and brought forth our New Yorks and Philadelphias, and Baltimores and Bostons in the east, and our Chicagos and St. Louis, and Cincinnatis, and San Franciscos in the west? What has dammed our streams and turned their currents upon the wheels of our factories, and made our Lowells and Lawrences and Fall Rivers, and your own Janesville? What was the torch which lighted the fires in our furnaces and rolling-mills, and what is it that has kept them burning from the day's dawning till another dawn, and from the birth of January to the death of December? What has sent the locomotive snorting from the Atlantic across the plains to the Pacific, and threading its way from city to city, and even rolling into the modest hamlets of the most unpromising sections? Why hover the ships in our harbors like bees about the flower, or confiding birds about the hand that feeds them? What has made the nation what it is—the patron of commerce, the promoter of education, the land of industry and enterprise, the gorgeous home of forty-three millions

Digitized by Google

of freemen? The three millions of American farms have made America. The harvests from our five hundred millions of cultivated acres have built our store-houses and railroads and school-houses, and fed our commerce and peopled our cities. The sound of the reapers and threshing-machines is the music which allures the emigrant to our shores and soothes him into contentment. Agriculture is

THE WORLD'S GREATEST NECESSITY.

and its richest blessing. The city, with its royal architecture, its monuments, its industry and its culture, is an object of pardonable pride to itself, and of admiration to the country, but it borrows its flush of ruddy health from the roses, and its dignity and importance from the fields. When the husbandman folds his arms and the soil sleeps, the proudest city starves, the bustle of her industry is hushed in the silence of despair, the shipping deserts her wharf, and, though a less curiosity than Pompeii, she is scarcely less desolate. Enterprise sits in the shadow of the groaning granery and laughs at the flames which melt down a Boston or a Chicago, and before the last ember has ceased to burn, sets a new and more beautiful city upon the smoking ruins. But a *field*, devastated by grasshoppers, strikes terror to the very heart of the nation, and almost paralyzes its energies. We sit down in the studios of our artists amidst the eloquent marble and the reflections of beautiful nature upon the canvas, and worship the genius which aspires to excel in the New World the artistic achievements of ancient Greece and Rome, but, if reflective, never forget that but for the plow and the cultivator, these halls of art would be as cheerless and uninviting as the chambers of the Roman caticombs.

The world's fortune and fame and happiness have been carried out by the plowshare, sometimes directed by a Burns, and sometimes by him who, knowing nothing of the world and the world little of him, unknowingly and imperceptibly contributed to the world's advancement and died in obscurity and unmourned. In the early stages of American agriculture, when the few acres cultivated were badly worked and a portion of the east and all of this fertile west were covered by the wild growth of nature, the nation was weak and only prospectively important. It is considerably within fifty years that these States have awakened to an appreciа-

Digitized by Google

tion of their greatness and in astonishment at their development. The sickle and the hand-rake were feeble instruments with which to build up a nation. The flail swung too leisurely and fell too lightly to summon the rocks into magnificent storehouses or to rise upon the seacoast or upon the plain. When the spring-time invited the farmer to his sowing he looked at his insignificant little sickle and inquired, how much can I reap with that? at his hand-rake and asked, how much can I garner with this? At his flail and pondered, how much can I thresh with this? And when he had necessarily arrived at the conclusion that the product of his summer's work would scarcely be more than enough for his own consumption, the carpenter put up his plane, the merchant locked the door of his store, the ship weighed anchor and sought more promising ports, the emigrant turned back and postponed his coming to an indefinite future, the rich minerals of the earth were promised another season of uselessness, and the log-hut was safe where advanced agriculture has since erected the mansion.

THE FARM OF THESE EARLY DAYS

was as cheerless as the desert, and the life of the farmer a routine of unprofitable drudgery, scarcely more encouraging than the monotonous walk of the convict upon a tread-mill. Summer after summer he wore himself out for a suit of homespun and enough to eat in the winter; he kept but little stock, neglected to keep as much as he might have kept, and what he had was scarcely an improvement on none. His children were driven by poverty from the school-house, if, indeed, they were within reach of one, and grew up in ignorance and with a fixed determination to learn nothing during their whole lives, even though they could just as well as not. Accordingly, that sort of enterprise which suggested the putting of the grain in one end of the bag and a stone in the other to balance it, was devotedly adhered to and worshiped, and the result of all was that farming became more and more irksome and uninviting, and poverty stalked over the farms and through the streets of the cities and villages. The country with its millions of acres of fertile land was scarcely better off than the owner of a fortune which is locked in a vault which the most persistent efforts of mechanism can not open. But time worked a change; a wonderful change. Genius awoke from its stupid sleep and began to scatter

Digitized by Google

its useful inventions over the farms; it brought the cradle into the harvest-field and the sickle was hung upon the tree and rusted almost into forgetfulness; it set a revolving rake upon every farm, and bade the farmer to rear stacks wherever before he had a cock of hay; it broke the flail over the cylinder of the threshing-machine, which it placed in every barn, and with its buzzing charmed sluggishness into activity. Enterprise emerged from the log huts and walked over the the barren fields; it welcomed the fruits of inventive genius; it began to fertilize the exhausted ground; it looked about for means to improve the stock; it built barns where there were none, and houses where there were huts; it educated the boys and girls of the east and sent them out into this great west to develop its richness and contribute to the prosperity of the nations. The wild winds whistling through the forests and moaning over the prairies, and the howl of the wild beast mingling with the yell of the Indian, welcomed

THESE ADVENTUROUS PIONEERS

to their new homes. The sound of the woodman's axe, hewing a pathway for the march of civilization, echoed among the trees and the far-off hills like peals of thunder in the silence of the midnight; the ground laughed with fertility, but the woods frowned and the silent sky wore a sadness from which the stars twinkled like tear-drops on the mourning cheek. None but brave hearts dared make a home amidst such solitude and the weird whisperings and screamings of the winds. With the gun in one hand and the axe in the other, these early settlers reached the forest, and soon the smoke from the rude fire-place began to curl in the air and fill it with an incense of home; the prairie was touched by the plow and a sea of golden grain waved in the sunlight and cheered the heart of the world; villages began to dot the plains and grow rapidly to densely populated cities; the old east felt a thrilling current of health leaping from these harvest fields and coursing through her own heart; nature emptied the harvest so lavishly into the lap of the emigrant that he sat down in the midst of his burthened acres and mourned his inability to garner all that the earth would bring forth. Genius again come to his assistance. It drove the mowing-machine to his door and its clatter filled his soul with ecstacy; it found him with the cradle in his hand and mounted him upon the reaper; it im-

Digitized by Google

proved upon his threshing-machine and attached it to his fanning-mill, it gave him plows and harrows and cultivators of increased efficiency, and improved generally upon his implements from the most important to the most trifling. He availed himself of these facilities, and the great west became a vast harvest-field—the support of the nation and largely the granary of the world. To-day it is a blooming, fragrant Italy—the lovely valley of the Dehra Doon, of India, blossoming amidst the mountains and rivers and inland seas of America. The east now looks to the west for instruction in the

SCIENCE OF AGRICULTURE.

She listens to the song of our harvesters, and looks upon our overburdened elevators with a consciousness that soil and climate are not alone the cause of such gladness and enormous yield. She admires our orchards and studies our system of horticulture which produces such varied and magnificent results. She walks in our gardens and studies the growth and beauty of our roses, and geraniums and heliotropes, and goes home to imitate our successful floriculture; she examines our daises and acknowledges their approach to, if not their equality with, the excellence of her own; she purchases our stock and takes it east to improve her natives, and she unhesitatingly admires the progress and enterprise on our western farms. Such briefly has been the progress, such is the present condition and such are the benefits of agriculture and its kindred industries in the northwest. Its present perfection is the fruit of unflinching fortitude, personal sacrifice, laborious toil, and much unprofitable experiment. The west was a huge volume, and experience was the only teacher of its lessons to the pioneer. He bravely placed himself under instructions at the feet of that merciless instructor, and what he learned he gladly imparted to those who come after him but much remained which could be taught only by the original tutor, and much yet remains which can be learned only from harsh experience.

If it therefore be true that the sweat of the farmer's brow has nurtured this nation into greatness; that his privations in this new northwest has surrounded thousands with luxuries in elegant homes; that the three hundred millions bushels of grain which he annually forces from these valleys and plains construct our internal improve-

Digitized by Google

ments; and that capital grows corpulent upon the factories and commerce which he feeds, is it unreasonable that he should demand that nothing be purposely placed between him and the full enjoyment of the proceeds of his labor? Is it unreasonable that he should complain that capital, which he has largely created, and which of itself is incapable of producing additional wealth, is exorbitant in the rate of interest which it demands for its use, and is heartless and unjust in its arrogance? Is it true that the wealth which has been dug from this western soil and showered upon the capitalist belongs absolutely to him; that it has the right to turn and sting the hand which first nurtured it into existence? No, it has no such right, and the law which sanctions it is the embodiment of treason to the State. It encourages that which is non-productive to cripple that which is; it lets loose a Shylock upon every farm, and applauds him while he whets his knife and demands his pound of flesh; it builds a barrier between willing industry and millions of these wild acres, and in so doing it cripples the prosperity of the nation,

AND THAT IS TREASON.

It prevents the farmer from enjoying a just share of the benefits which modern improvements and the advance in science generally have conferred. An enormous rate of interest is tacked upon every implement he buys, upon every pound of groceries which he takes into his kitchen, upon every garment which he or his family wear upon their backs, upon his textiles, upon his church-pew, and even upon his grave; and with all the improvements on machinery, and notwithstanding the general advance in the science of agriculture, he is compelled to work from the early dawn until the sunset, month after month, and year after year, ostensibly for a livelihood, but really to pay interest. He cannot escape the burden and live. He must have means of transportation, else his three hundred millions of bushels of grain would be of little use to him, and none to the country. Railroads became a necessity; but a high rate of interest at every stage of the progress of construction, from the taking out of the iron ore to the laying of the rail, is attached to the cost of construction, and the aggregate is double the actual worth of the road. There is ten per cent. at the mine, ten per cent. at the furnace, ten per cent. at the rolling-mill, ten per cent.

Digitized by Google

on the contract for construction, ten per cent. on the labor, ten per cent. on the timber and added to all a half dozen or more profits, which are regulated, as profits always are, by the prevailing rate of interest. You remember, when you were boys, how easy it was to count a hundred by tens—it isn't any harder now that you are men, and capital doesn't seem to find it even so hard. A railroad, therefore, represents double the value which is actually in it. For every dollar of value there are two dollars to be supported by the industries of the country. Every bushel of grain which is transported must pay double freight; every passenger who rides must pay double fare; and the rates are established with a view to ten per cent. dividends.

RAILROAD CAPITAL

does not intend to earn less than the prevailing rate of interest; it is the most ravenous capital in the world—its stomach for profits is never filled—its appetite for dividends is never delicate. It must have its ten per cent. if there is any possibility of getting it. The shrill whistle of the locomotive, therefore, as it has rolled over the western plains, has often been the cruel demand of capital for the last drop of the life-blood of our farms. The rumbling of the train has often struck terror to the soul of the farmer, who has stopped his reaper in the midst of his rich harvests, and, wiping from his brow the sweat of honest toil, has, despairing, considered whether he had better leave the golden grain to rot where it had grown, or garner and give it to capital. Blame him for protesting against the outrageous feasting of railroad capital upon his life? Mock him if in his wild frenzy of dispair he was sometimes fanatical in his demands for reform? The spirit which would prompt such feelings would make merry with the grinning trophies of death, and reckon as melody the dull throbbings of shattered and hopeless hearts. The contest of the western farmer with the railroads was, largely, a contest with a high rate of interest; it was a battle of life and death; it was in the interests of his children; it was to establish the possibility of keeping these farms populated and productive, and of preventing them from again becoming a wilderness. The possibility of a man's having to give his farm to get its yield to market, and to throw the crops in besides, would have some tendency to make a man fanatical. There are, to-day, locked in the vaults of railroad-

Digitized by Google

constructing Shylocks, millions of dollars which belong on the farms of Wisconsin. If you had those dollars you could coax the soil to double its already magnificent yield; you could lay the foundation of more such beautiful cities as the one within whose limits we meet to-day; you could make your gardens more productive, beautiful, and fragrant, and compel your barren spots to bud and blossom with the sweetness and beauty of the rose. But all this is but the slightest trifle compared with the enormous aggregate of the

BLIGHTING CURSE OF HIGH INTEREST.

The government is paying an enormous interest on the national debt, and every producer in the country is feeling the effects of it. Business all over the country is stagnate—many of our once busy factories are as quiet as an ancient ruin, and the birds build nests in their chimneys; the strictest economy is practiced, and is a necessity in almost every household; thousands are without employment or the means of obtaining the necessaries of life, and the produce of our farms has been stored in Chicago and in our barns begging a market in the very midst of hunger. And why this state of affairs? It is partly because a high rate of interest has tempted capital and business ability from the productive industries. The story of a New York millionaire illustrate this. Said he to a friend of mine; "When the war began I had several ships upon the sea, three hundred men in my employ, and five hundred other men were dependent upon my business for employment. The government offered seven and three-tenths per cent. for money and exempted its bonds from taxation, I found this to be equal to at least ten per cent. I then carefully calculated the profits from my business and found that they did not exceed that rate, and were constantly endangered by the usual risks. I called home my ships and sold them, discharged my three hundred men, threw the other five hundred out of employment, shut up my store, invested my money in United States bonds, placed them in that vault, and now my only business is to sit here and wait for the coupons to mature, cut them off, collect the interest and invest it in more bonds." Thus a high rate of interest tempted one man to withdraw $5,000,000 from active business and to put it beyond the power of nearly a thousand men to live otherwise than by the practice of an economy which was often

Digitized by Google

little short of starvation. Eight hundred men were each thus compelled to make one barrel of flour go as far as two, or four, or six had gone before; the grocer and dry-goods merchant, deprived of the custom of these people, were compelled to add another regiment of useless clerks to the army of unemployed, and the loss of their patronage to others produced a like result, and a large amount of pauperism, flowing directly from the locking up of only $5,000,000, is reasonably supposable. But $5,000,000 is only the tiniest speck in the ocean. Hundreds of millions have for the last ten years been thus locked in the musty vaults of capital, feeding upon our crippled industries, and an unemployed, hungry multitude have been starving in the midst of our wheat-fields and our bakeries. But the payment of interest upon such capital is what more intimately concerns us.

### OUR NATIONAL BONDED DEBT.

bearing interest is about $1,800,000,000. Upon $1,096,000,000, of this we are paying interest at the rate of 6.75 per cent., or an annual total of $74,000,000; upon $613,000,000 we are paying interest at the rate of five and sixty hundredths per cent., or an annual total of $40,000,000. Our bonded debt, therefore, is costing us directly in interest $114,000,000. Add to this the tax exemption, probably $30,000,000, which is an interest our producers have to pay, and we have a sum total of $144,000,000, or an annual per capita tax upon our entire population of something over $3. This begins to look a little startling, but we have scarcely begun the investigation. There are over $3,300,000,000 in railroad, State, and other bonds, bearing an interest of seven per cent. and amounting annually to $220,000,000. Then it is estimated that the individual indebtedness of the country will amount to the enormous sum of $12,000,000,000, which at the estimated rate of interest, ten and one-half per cent., would yield nearly $1,800,000,000. Now you have something worth being startled at. And mind you, I have not included in this estimate the interest on the government certificates of indebtedness, the interest on the navy pension fund, nor that on the Pacific Railroad bonds. In fact, I have not much heart to follow this matter in all of its details—it is too prophetic of ultimate general bankruptcy—too suggestive of unpardonable injustice to the producing population of America. We have gone far enough, however, to learn that we are

Digitized by Google

annually paying for interest, $2,165,000,000, or a per capita tax upon every man, woman, and child in the country of about $50. But, as the producers of the nation are compelled to bear this burden, and as the census allows only about $5,000,000 to this class, their individual annual assessment is $433. Five millions of producers are each thus compelled to pay from their daily earnings $1.18 each and every day in the year to satisfy the demands of capital in this matter of interest. This is certainly a startling array of figures, but the estimate is lower than any I have ever seen made. It must be admitted that, in estimating the amount of the individual indebtedness, we meet with many difficulties—indeed, it is largely a matter of conjecture, but if it will please anybody to deduct one-half from the estimate it will result in little to give encouragement in any direction while the present high rates of interest continue. It is not more certain that the sun shines in the heavens than it is that this people cannot continue to pay the present rates of interest and escape the humiliation of acknowledged bankruptcy with its legitimate consequences of

REPUDIATION AND DISHONOR.

We are annually paying more for the privilege of being in debt than the estimated yearly increase of our wealth amounts to; and yet in the face of all this, the advocates of a high rate of interest, completely baffled by the stubborn facts, fall back upon what they call the unparalleled growth of the country and its increase of wealth. They are like the boy, who, finding that he couldn't whip another boy, blubbered out, "Well, if I can't lick you, I can make faces at your sister." The increase of wealth has been unmistakably great in the past; wealth has been produced from the mine, the soil, and the factory, and is represented in the improvements I have noticed; but while this increase of wealth has gone on there has been a rapid increase of indebtedness which becomes more and more burdensome and exhausting as maturing interest is added to the principal or paid into the pockets of those who use capital for oppression only. But the payment of interest does not necessarily diminish the increase of wealth, immediately or in a direct way. If the interest be payable to our own citizens, of course the wealth remains in the country, but the trouble arises from diverting it from its legitimate and productive channels into those which are

Digitized by Google

non-productive—a course which must sooner or later cripple production and dry up the source of all wealth. Under such circumstances each succeeding year finds us nearer to bankruptcy than the preceding; the mortgages on our farms are gradually increasing; our industries grow less and less vigorous, and death gradually spreads its pall over us. This whole question may be summed up in the one incontrovertible statement: Legitimate business cannot pay ten per cent. interest and long survive the drain. Least of all, can agriculture sustain itself under such a pressure. In 1870 the farms of Wisconsin were valued at $300,000,000. It is believed that the estimate that one-third of this value was in mortgages is not unreasonable. The interest upon one-third of $300,000,000 at ten per cent. would be $10,000,000. Now, it is calculated that

THE PROFIT OF FARMERS

is not more than three and one-half per cent., which on $314,000,000 —the value of farms and farming implements—would be about $11,000,000. More than nine-tenths, therefore, of the net-earnings of the farmers of the State went for interest in 1870. In Illinois the value of farms and farming implements was $954,000,000, and interest upon one-third of that would amount to $32,000,000, and the profits, at three and one-half per cent., would be about $33,000,000. The farmers of Illinois had one million of dollars after paying their interest in 1870. In Michigan the value was $400,000,000, which, at three and one-half per cent., would yield a profit of about $14,000,000, and, to nearly exhaust this, the interest on one-third of $400,000,000 would be about $13,000,000. The ratio is, of course, the same everywhere, and these States are cited only to more fully demonstrate the subject to your minds. Of course, the increase in the valuation of the farms must be taken into consideration, and in estimating this we can scarcely do more than conjecture. It is true we can ascertain the percentage of increase in the valuation of farm-lands from one census to another. In Wisconsin, from 1860 to 1870, it was three and one-half per cent.; in Illinois it was five and one-half per cent.; in Michigan it was nine per cent.; and this rather looks as if farming was a pretty profitable business after all. A careless observer might be induced to believe from these figures that a high rate of interest did little to cripple an industry which produced such highly respectable re-

Digitized by Google

results. But it must be remembered that this increase of valuation is partly founded on the improvement of land before unimproved.

An emigrant, for instance, takes up a quarter section and begins to improve it; in ten years it will represent considerable value which will be added to the aggregate of valuation, but it will not increase the value of your farm, except that settlement, to some degree, enhances the value of all property in the State. "But farms did increase in value," you say. Certainly, but not to the extent generally supposed—that is, the increase was not wholly profit. Fences and houses and barns make property more valuable, but they represent value themselves, and it does not take a great many of them to represent a great deal of it. Railroads and school-houses and churches and young orchards and shade-trees and flowers, make the farm more valuable, but it is as if you place a dollar beside another dollar and say that one had doubled. Was it true that land which was in a high state of cultivation in 1860, was any more productive in 1870, and if not, in what did the increase of value consist? Was it not largely in the improvements which your loose or borrowed capital placed on or about your farms? Was it not largely in the accumulation of what may be termed luxuries—more and better society, more elegant home surroundings, more luxurious churches, things which are highly desirable, but which are wholly barren of pecuniary profits? Was it not true that your mortgages held as great a ratio to the entire value in 1870, as they did in 1860? And is that not true on this 9th day of September, A. D. 1875? Indeed, is it not true that there is a greater proportion of

VALUE IN MORTGAGES

to-day than there was in either 1860 or in 1870? This is doubtless true, for while the mortgages have increased, the value has decreased, especially since 1870; and this decrease and the limit of increase of value is a matter which those who are fond of citing to the growing valuation of western farms as an evidence of the farmer's prosperity, seem to have entirely lost sight of. There is a virtual limit to the value of farms, When a State becomes thoroughly populated, and the land has been brought to its limit of productiveness, and suitable buildings and fences and other improvements have been erected and made, the farms have reached the limit of their value, and so long as the improvements are kept up this value will vary very little. Barring the fluctuation of our currency, a farm in New York, New Jersey, Pennsylvania, or

Digitized by Google

Maryland, is worth no more to-day than it was fifteen years ago, and many of them are not worth so much. Now, the farms of the west are reaching this limit of value, and some of them have already reached it, and such as have are worth a principal upon which their yield will pay an interest—nothing more. If this matter of increase of value is to be continued to be used in support of a high rate of interest, let us remember these things: Our mortgages are not only not decreasing, but they are increasing; much of the increase of value is simply capital invested in improvements; there is a limit to the value of farm lands; and when that limit is reached, where are the profits coming from after paying ten per cent. interest on your unpaid mortgages? "The mortgages will then be paid," perhaps you say. Will they? When do you propose to begin to pay them? You will never pay them by giving more, and that is what we are doing now. The east passed through the same stages of development through which the west is passing, and arrived at a point of development which the west is approaching, and though paying a less rate of interest than the west pays, the east is to-day

MORTGAGED TO DEATH,

and the reason must be that she finds it impossible to pay her mortgaged indebtedness. What, then, is to be the final result? Will the tread of avarice stamp the fertility from these fields, and blight the fragrant beauty of these gardens? Is the future to find the reaper rusting upon the deserted prairie, and the hum of the threshing-machine hushed in the midst of beggary and desolation? Are these farms, with their wealth of splendor and productiveness, to empty their occupants into vassalage and mock the tear which trickles down the cheek grooved by the sweat and bronzed by the sun in which honest toil has dug the American nation of to-day? No; this beautiful sunshine which the husbandman has scattered as he sowed, and which the harvest-fields of the nation have reflected all over the world, and as beautifully as the ice-mountain of the frozen north flings back the ray which dances on its surface, will never fade into such a black and starless midnight. The builders of our national temple, in whose broad corridors 43,000,000 of voices chant the melodies of civil and religious freedom, and whose pillars are commemorative of past and prophetic of future justice, will never be compelled to stoop to beg a resting place in its shadow, or a home amidst its magnificence.

Digitized by Google

# REPORTS OF SUPERINTENDENTS.

## DEPARTMENT A.—HORSES, ETC.

BY JOHN L. MITCHELL, SUPERINTENDENT.

The horses at the last State Fair were as numerous as usual, the two hundred and thirty stalls not being sufficient for their accommodation. A large portion of the animals, however, were entered with no intention of being exhibited, but simply for the convenience of stall-room on the grounds and free forage.

In thorough-breds, jacks, and mules there were few entries.

The competition in roadster-stock was not as keen as common, Mr. C. T. Bradley, of Milwaukee being the only large breeder represented. The get of his stallion "Milwaukee," showed remarkable uniformity in shape and color; their looks in the ring were evidence of great care in their fitting.

The draft-class was far ahead of the others in relative merit, and indicated an ever increasing interest in this kind of horse.

The ring for aged stallions was probably superior in its way to any that has heretofore been seen in the State, Canada and Illinois, as well as Wisconsin, being represented.

There is a division among heavy-horse men, and it might be well for the sake of better feeling among them to have two classes for draft, namely, Norman and Clydesdale.

That tradition of all agricultural societies and physical impossibility, the general-purpose horse, ought to be stricken from the premium-list, unless it is thought wise by the Society to encourage aimlessness in breeding, and to foster the raising of nondescripts, that fill their stalls, carry off their money, and add little to the attraction of their fairs. The substitution of a "carriage" class would be a move in the right direction. In such a class, judges

Digitized by Google

would have a more definite standard in view, and the attention of breeders would be called to what, in my opinion, is the most profitable horse of the day.

Under the adverse circumstances of a muddy track, the races went off as satisfactorily as such performances usually do. The Society paid in premiums $2,100, it received in entries $1,200, receipts from grand stand $279, leaving $621 to be accounted for at the gate. Notwithstanding the inclement weather, it is safe to say that the Society profited by the speed premiums offered at the last fair. Where exhibitions are held near large cities, there can be no doubt of the pecuniary advantage of good races. These cannot be had without generous purses.

In retiring from the horse-department, I have to thank my co-laborer, Mr. N. S. Green, for his unvarying kindness to me in our undertaking, an undertaking in which he has worked longer and more faithfully than myself.

---

## DEPARTMENT B.—CATTLE.

BY GEORGE E. BRYANT, SUPERINTENDENT.

The exhibiton of horned cattle far excelled in numbers that of any previous year. Twenty additional stalls were built, and all were filled. More fine grades were on exhibition, and the herd of "blacks" shown by Mr. Davis cast longer shadows than ever before. I believe there should be a change in the classification of this department, which would be more acceptable to the exhibitors, and add to the beauty and usefulness of this branch of the fair. No animal in the thorough-bred classes should receive a premium unless its name, number, and volume of herd-book, in which the same is recorded be given. Short-horn breeders have brought themselves to this standard, and the breeders of other breeds should be brought to the same standard, and I recommend that the Secretary of the Society be directed to purchase full sets of herd-books for reference. Your superintendent again bows his thanks to the exhibitors in his department for their uniform courtesy to him and each other, and hopes that on this Centennial year, the breeders of choice stock may make our exhibition at your State Fair, worthy of themselves and the year.



Digitized by Google

## DEPARTMENT C.—SHEEP.

BY T. C. DOUSMAN, SUPERINTENDENT.

In this department the show was a success, all the pens being filled, and additional ones had to be built. The sheep exhibited by Messrs. Paul, Humbird, Lawrence, Craig, Cook, and others, were choice merinos, and they say cannot be beaten anywhere. The only competition they had was among themselves.

Of the importance of the wool-growing interest and the progress made in improving the breed of fine-wool sheep in the State, I can say no more than I did in my last report. Should another premium be offered by the Society for the best cleansed fleece, I would suggest that the money be appropriated to the wool-growers' association, and let the members make the rules necessary to compete for the premium, as well as appoint the committee to award it.

The judges on fine wool, Mr. Kelley, a very extensive fine-wool grower, from Illinois, and Messrs. Hammond and Keyes, of this State, were the best judges the Society ever had. With one exception, not a word of fault was found by an exhibitor, to my knowledge, relative to the award of premiums.

The exhibition of long-wools was the largest and best ever made in the State, and the competition with our Canadian brethren was sharp. The sheep in this class from Canada were excellent, and they justly carried off some of the prizes. I think their long-wool sheep are superior to ours, and that it is largely to be attributed to the peas and roots fed them, in place of corn usually fed to sheep in this State.

---

## DEPARTMENT D.—SWINE.

BY T. C. DOUSMAN, SUPERINTENDENT.

The exhibition of swine in the large and middle breeds was about the same as in 1874, but I observed a marked change in the quality, and being the same gentlemen who have exhibited for years, it

Digitized by Google

shows an improvement. This improvement was specially marked in the Berkshire more than in the Poland-China. In the latter breed, Illinois leads our breeders. Mr. Ellsworth, of Woodstock, took most of the premiums, but I think from the numerous sales made to our citizens by Mr. Ellsworth, they soon will win a portion of the premiums. The pens were well filled with the small breeds, Essex and Suffolk, and shows the wisdom of the Society in offering premiums again for those breeds. The exhibition in this class was so good, and the improvement so marked, that I think, unless the Berkshire breeders look out, the time may come when the Brooks and Jeffers stock of small breeds will be the favorites soon. It is a great pleasure to the superintendent to have the exhibitors satisfied with the award of the judges, as was the case this year.

Having been superintendent of this department for three years, and as I am about to retire from the position, I desire to return to the exhibitors my sincere thanks for their gentlemanly conduct and cordial, kind treatment ever shown me, and trust they will continue to improve the stock in this department in the future, as they have in the past, and they and the State be largely profited thereby.

---

## DEPARTMENT E.—POULTRY.

BY A. A. BOYCE, SUPERINTENDENT.

The breeding and rearing of poultry is of growing importance, and the number of persons who keep fowls for pleasure and profit is constantly increasing. Several well sustained periodical journals, devoted almost entirely to the poultry interest, attest the magnitude of the business. The capital employed in the business of rearing, fattening, and preserving poultry for market—costly buildings for the purpose of keeping dressed poultry in a frozen state, and for preserving eggs in fresh condition, awaiting, if need be, a better market, is enormous.

The rearing and care of poultry affords pleasing and profitable employment to those who are unfitted for the more laborious work of the farm.

Digitized by Google

By the liberal increase of the premium-list of this department, over that of the preceding exhibition, it was to be expected that a corresponding increase in the stock exhibited would be made.

Some defects in the building that were pointed out in the last report, has also been remedied, and better ventilation and light provided, and yet there was a falling off in entries in some if not all the classes. The falling off in entries I believe is to be attributed more to the early time of holding the exhibitiou, than to a lack of interest by the owners of stock. Very few of the fowls were in good feather, and on that account many owners of fine birds would not exhibit them. Among those who made creditable exhibitions, were P. A. VanVrankin and W. Robinson of Wauwatosa; H. D. Gardner, Leon Howard, J. B. Judson, E. P. Richardson, W. P. Lynde and Mrs. J. A. Ladd, of Milwaukee and W. W. Ellsworth, of Woodstock, Illinois. The thanks of the Society are due to the Wisconsin State Poultry Association, for the use of their exhibition-coops, and I wish to acknowledge my obligation to H. D. Gardner, of Milwaukee for the assistance rendered me in this department.

---

## DEPARTMENT F.—AGRICULTURE.

BY DR. C. L. MARTIN, SUPERINTENDENT.

The exhibition in this class was in the main good. Samples of choice wheat, oats, and barley were on exhibition, the product of numerous growers. A bushel of Fultz wheat, winter, shown by Mr. J. W. Wood, of Baraboo, was pronounced of excellent quality. Mr. Wood also exhibited choice samples of other cereals. The show made by Mr. John Ferry, superintendent of the Experimental Farm, at Madison, was very creditable, attracting much attention from the tasteful arrangement of the cereals and vegetables shown. Mr. Ferry does not compete for premiums offered by the Society, but simply to show what the Experimental Farm is doing in making experiments, testing new varieties of grains and other useful products of the State. On behalf of our Society I thank Mr. Ferry for the beautiful, interesting, and profitable exhibits.

Digitized by Google

### GARDEN AND VEGETABLE PRODUCE.

The premium-list in this class had been largely increased and the Society hoped to see a large and excellent showing. It was disappointed. The show was meagre, not even respectable for a State producing such a variety of vegetable products. Mr. J. M. Smith, president of the Northern Wisconsin Agricultural and Mechanical Association, had a few choice samples, also good exhibits by others, but the number was small and not at all creditable to this valuable interest of the State.

### HOUSEHOLD PRODUCTS.

This exhibition was not creditable to those ladies who manufacture so largely excellent bread, cake, and preserved fruits, etc. It is true the premiums offered by the Society are not large, but the ladies should feel some degree of pride in having this toothsome interest creditably represented. We hope to see a better showing in the future.

### DAIRY PRODUCTS.

The premiums for these products had been increased beyond a sum ever offered by any society in the Union, and hence large exhibits were anticipated, and I am happy to say were fully realized. The number of cheese factories represented was very large, and the samples shown were numerous and of excellent quality. It was remarked by those competent to judge, that the exhibition of cheese was the best ever made at a State Fair in the United States. The annual product of this nutritious and valuable article of food is now very large in the State, and is worthy of our encouragement and fostering aid. The large premiums should be continued.

The showing of butter was fair, but the weather being very warm, made it soft and in bad condition for examination by the judges. I would recommend the erection of a suitable addition on the north side of agricultural hall, where butter could be put at night, and placed upon ice if the exhibitors desired. It would thus be in better condition for the committee to judge of its merits, and in more presentable shape as an exhibit. The display of butter was not large; not what it should have been from the premiums offered. The

Digitized by Google

interest, however, is an important one, and I would recommend that the liberal premiums be continued, hoping that it will stimulate manufacturers of this excellent product to compete for them.

---

## DEPARTMENT G.—HORTICULTURE.

BY G. J. KELLOGG, SUPERINTENDENT.

The unusual severity of the months of January and February, 1875, the coldest two months on record, the unfavorableness of the spring, the cold and wet summer, with hard frosts the 22d and 23d of August, throughout the State, almost destroying the grape-crop, and the State Fair coming the same week of the American Pomological Society Exhibition at Chicago, at which the Wisconsin State Horticultural Society had made arangements for an exhibition, were combined causes, together with the fact that the State Fair was three weeks earlier than usual, in making the prospect for the horticultural department of the Wisconsin State Fair gloomy indeed.

After consulting with the officers of the Horticultural Society, and the Secretary of the State Agricultural Society, it was deemed advisable to issue a circular, urging all interested to assist by making a special effort to make a commendable show. This circular was mailed to all former exhibitors and many others. The time of the fair arrived, the hall was put in order, two crates of crockery ordered, the tables were provided with clean, white paper, and exhibitors began to spread out. Soon it became apparent that they must double up, and before the fruit was all out many had to pile three plates upon one, and the last to open had to be provided with extra room by closing one entrance and building temporary tables. The entries probably exceeded anything before made at our State Fairs in this department, numbering five hundred and twenty-five.

The center of the hall, with its entire table-room, was devoted to the floral department, H. W. Roby, superintendent. Notwithstanding the severe frosts, the cut-flowers alone could have covered the entire tables. James Vick, Rochester, N. Y., had a splendid collection, and this department of the hall was a grand success.

Digitized by Google

To give a full report of the fruit-department would be impossible. A. G. Tuttle's collection of apples was up to his usual standard of excellence, as will be seen by the number of first premiums carried off by him. It would seem that from this and former exhibitions that the Baraboo country had some of the touches yet of the Garden of Eden. An unusually fine display of fruits from Beaver Dam, by Gould's Nursery Company, took a large share of premiums, while G. P. Peffer could have covered one-half the entire tables of the professionals with apples, pears, plums, grapes, etc. E. Wilcox, from the north, showed us clearly that something besides crabs can be raised in that region. He took the "blue" on ten varieties of apples adapted to the northwest. Among professionals, Geo. Wolff, Wm. Finlayson, and Wm. Kitzrow each drew first prizes, and though not large, had some fine collections of fruits. The exhibition of pears was mostly confined to the lake-shore region. A few $5 specimens of Flemish Beauty were exhibited by A. G. Tuttle, and entitled to the first prize. Messrs. Stickney, Baumbach, and Gilbert made a fine collection of apples, but competed for but few premiums, which they took, as a matter of course.

The display of grapes, by C. H. Greenman, drew their full share of attention, and but for the hard frosts would have taken more first premiums. For show of superintenden'ts exhibition, see award of premiums.

The non-professionals were out in full costume, and could have filled the entire hall. The competition was so great that it was difficult to decide who was victor, especially so, as many collections were piled up for want of room. A careful reading of the award of premiums will show the general standing of the collections.

Wm. Reid's display of grapes was the finest he ever made of certain varieties, from which a box was packed and forwarded to the American Pomological Society, at Chicago.

The finest collection of pears among non-professionals, was from Dr. James Ozanne, Racine. Messrs. Parks and Thomas were unable to exhibit their fine collections of pears, although Mr. Parks brought a branch heavily laden with fine specimens, a portion of which, and some from Dr. Ozanne's, were immediately forwarded to the Chicago exhibition. For names of exhibitors and award of premiums, see report of committees on premiums.

If it is possible at the next State Fair to arrange the smaller en-

Digitized by Google

tries side by side, it would be very desirable, and the awarding committees will be able to decide without so great a liability to error, and with half the labor.

Winter apples, having attained neither size or color, owing to the earliness of the fair, did not appear well, nor could they be recognized by good judges. Although the apple-crop throughout the State was small, yet the specimens from the interior were fairer than usual, and a good judge wrote me that nowhere east had he seen apple-trees so well loaded as along the lake-shore counties of Wisconsin.

I hope the condition of the treasury will permit our offering the same amount of premiums as two years ago, and to improve the quality of the exhibition, and give us plenty of room. I would recommend that exhibitors be restricted to thirty varieties of apples.

The only drawback the American Pomological Exhibition seemed to have upon us, was to take away many of our best committee-men, whose places it was hard to fill.

---

## DEPARTMENT H.—MACHINERY.

BY R. D. TORREY, SUPERINTENDENT.

In submitting a report as superintendent of this important department, for the fair of 1875, I am aware that it will be no easy task to advance any new thoughts or suggestions of value that have not already been presented by abler and more experienced minds for the consideration of this Society.

Justice as well as courtesy requires me to say that much, if not all of the success heretofore attending the exhibitions in this department have been attributable to the efficiency of my predecessor, Major Rufus Cheeny, who had by years of experience and adaptability, succeeded in making the display of machinery one of the most attractive features of the State fairs.

Upon assuming the duties of this position, I found that while the exhibition of field machinery and implements would be creditable alike to the manufacturers and the society, there was little if any prospect of power-hall having enough machinery in operation to

Digitized by Google

warrant the expense of an engine to operate, and after diligent inquiry, I found this to be almost the universal feeling among those who had been exhibitors, viz., that the inducements offered by the Society were too insignificant in comparison to the expense and trouble of getting heavy operative machinery to the grounds and back, and of operating it while there; hence, nearly all had determined not to exhibit.

What was to be done was the question that had to be answered promptly, and it of necessity was determined that the Society would assume a part of the expense rather than fail in a creditable exhibition, a course which it seems to me is not correct under ordinary circumstances, and one which need not occur again if the proper course is pursued, and it is of the utmost importance that you should carefully consider this question and provide against any repetition of the kind. I am not fully convinced what is the best course to pursue to encourage and induce manufacturers of heavy machinery to make this department even better than ever for the fair of 1876. Whether it shall be by reasonable cash premiums, or by the use of medals or diplomas, or all combined. But I am fully of the opinion that this department does not, nor has it received the consideration it merits. I am not aware that the recommendations of my predecessor, or of the awarding committee in classes thirty-seven and thirty-eight for the fair of 1874, though they were worthy of serious and careful consideration, have secured any improvement in the position of the Society towards this branch of industry. Now, if it is desirable that each division superintendent should at this meeting show how competent he is, not only in the management of his department, but in the matter of presenting his views in writing as to necessary improvements in that department, it is equally desirable that some notice should be taken of his report.

After a careful reading of the reports referred to, as found on pages 362, 366, volume of 1874–5, of transactions, I am convinced that nothing better can at present be said or recommended, and I hope you will carefully consider and adopt such of these recommendations as the financial condition of the Society will warrant. I would respectfully suggest a list of well-classified premiums on separate pieces of machinery, as also a generous offer on the part of the Society for the best and largest exhibition.

Digitized by Google

I am aware it is claimed that it is difficult to decide what machinery should be named in the premium-list to compete, and it is also claimed that it is difficult to secure judges to decide on the merits of the exhibits. In answer to these objections I would refer you to the premium-lists of 1875, of the Northern Ohio, St. Louis, Kansas City, Michigan, and Iowa societies, where it is evident the plan indicated has proved successful, more especially would I refer you to the Northern Ohio premium-list. Permit me to say in conclusion that I took this position with reluctance and distrust of my abilities to perform its duties, and whatever of success I meet with is largely due to the able assistance afforded me by D. H. Cheney, and to the hearty support of the officers of the Society.

---

*To the Executive Board of the State Agricultural Society:*

The undersigned, chairman of the committee on machinery in Classes 38 and 39 herewith submit the following report:

The display of machinery in this department, though excellent and of great variety, and worthy of special commendation, was not so extensive as that of 1874, owing, perhaps to the threatning prospects of stormy weather. The committee found the department in unexceptionable order, and the disposition and display all that could be desired, and this judicious and methodical disposition considerably lightened the (it must be admitted) too extended and arduous duties of the committee. So far as known, all exhibitors were satisfied with the general and special facilities and accommodations offered by the Society.

The committee were instructed to examine all machines, and license was given to favorably recommend such new improvements as might suggest themselves as worthy of special commendation. The committee understand that some sort of recommendations were the natural and logical results of examinations, and without the least idea of offense to any one, they did as had been done for several years previous; they attached tags to such machines as they thought especially worthy of commendation, bearing the printed words, "first prize," "second prize," etc., in every instance, explaining to the party in charge of the commended machine, that the Society offered no premium in that department, and had only cloth-

Digitized by Google

ed the committee with discretionary power to *recommend* especially in giving all those interested, as the Society might, or might not endorse such recommendations. The cards, "first prize," used, were explained as only meaning a recommendation for diplomas, and the cards, "second prize," indicating a recommendation for honorable mention.

This is all the committee attempted to do, and did not dream of objections from any quarter; much less the protests that followed, which arose primarily from the fact that the committee gave to the party a "first-prize" card for "best display of agricultural machinery." The party who received the card, without thinking it aught amiss attached the card to a reaper in his collection. This being noticed a short time afterward by competitors in that line of machinery, a sharp and somewhat acrimonious discussion arose, as to the right of the committee to use such cards for such purposes, as the society offered premiums, holding that it gave undue advantage to other parties, who had already telegraphed to their friends that they had been awarded first prize, etc.

For the first time the committee saw their use of the cards was improper, because of the improper use that might be made of the fact, but they could only plead several years precedence, resolving, if not censured for their oversight, yet good faith, they would remove the cards, and thus in future prevent a like occurrence.

The facts as above set forth were presented to the executive board the next evening, which board stated to leave it to the committee to adjust the matter, and the next day the obnoxious cards were removed.

While the committee is expected to thoroughly examine the machines, and all implements entered in the classes given to their charge, they should, it seems, be provided with cards to suitably express the nature of the ward or recommendation, which the committee might make for meritorious machines, etc. The cards should be printed with the words "commended," or "recommended for diploma," etc., as the case may be, and such cards ought to be placed on the machines commended, giving the exhibitor the benefit of the Society's commendation, as in the case of stock, poultry, etc., otherwise, if the committee are not allowed to make known their mark, of what good are examinations at all, and wherefore the committee itself?

Digitized by Google

While submitting the foregoing facts and suggestions, the committee must not be understood as censuring in the least any officer of the Society, all of whom so far as the committee know or believe, acquitted themselves in a most commendable manner, especially so far as the department of machinery was concerned, and it is only to prevent misunderstanding in the future that these suggestions are submitted.

You will find on file, with Secretary Field, a list of the recommendations, which the committee believe proper to submit, which have, so far as the committee know, all been ratified by the board, and the list will no doubt be found under Classes 37 and 38, in "premiums awarded."

All of which is respectfully submitted.

S. D. CARPENTER,
*Chairman.*

---

## DEPARTMENT I.—MANUFACTURES.

BY SATERLEE CLARK, SUPERINTENDENT.

In this department, I am sorry to say, the display was not as good as on some former occasions. While there were many articles of great merit, many recent inventions that attracted much attention, and many improvements in articles of more common use, I cannot help expressing my astonishment that so few Milwaukee manufacturers avail themselves of so good an opportunity to exhibit their wares and advertise them to the world, where it can be done at so little expense and trouble.

The city in which the fair is held must necessarily derive a great advantage from our fairs, and it becomes, therefore, the duty of such persons as have attractive articles to exhibit, not so much to compete for a premium (as our premiums are not generally of great intrinsic value) as to show their interest in the Society, and the city in which the fairs are held.

There was so much that was attractive that it is hardly possible to give each article of merit special mention.

One word for the hardware-men of Milwaukee I must say; no

Digitized by Google

class of business men have done so much to aid us in our enterprise. The display in this branch of industry has always been good, for which the contributors are entitled to our best wishes.

The sewing-machine agents also do much to make our fairs pleasant, and attract the attention of as many people as any one article on exhibition.

Manufacturers of woolen cloths and cassimeres do not make as fine a display as formerly, while their ability to do so has greatly increased.

In domestic manufactures our fairs are a failure, and I suppose the reason is that many persons in the country fear to compete with the whole State, but go to their county fairs, where for the last few years competition has been much greater.

Mrs. Sallie Bell, of Greenfield, has carried away quite a number of premiums for the last three or four years.

I hope at our next annual fair, to be able to report more satisfactorily in this department, and give praise more generally to the manufacturers of Milwaukee.

---

## FORAGE-DEPARTMENT.

BY T. C. DOUSMAN, SUPERINTENDENT.

I deem it only an act of justice to the contractor, Mr. Grover, of Wauwatosa, to say that he filled his contract with the Society for forage, to the letter. The hay and straw was all good. I did not hear a word of fault found by any of the exhibitors.

The forage-bills were less than in former years, and was due to three causes: 1st. The price per ton was less. 2d. The quality being good, very little was wasted. 3d. I think less was spirited away than usual. Indeed, from the first day's experience, I was satisfied that $25 a day would not pay for the hay taken by those who had no right to it. After the first day I placed one of the numerous useless police to work watching it. I would advise the Society to detail two men to watch the hay, and keep it from being wasted and stolen. I think exhibitors coming from a distance

Digitized by Google

should provide the forage for their stock on their return home, or after they leave the fair-grounds. Should the Society adopt this rule, a large amount of forage would be saved.

By the aid of exhibitors in the stock-departments, I was enabled to keep the grounds in front of the stalls clean and neat, making it pleasant and agreeable to those desiring to examine stock.

Digitized by Google

# PREMIUMS AWARDED.

## DEPARTMENT A.—HORSES, ETC.

### CLASS 1.—*Thoroughbreds.*

| | |
|---|---|
| Best stallion, 4 years old and over, J. J. Ross, Mineral Point | $50 00 |
| Second best, Wm. Hall, Medina | 25 00 |
| Best stallion, 3 years old and under 4, Jas. & Thos. Barron, Columbus | 30 00 |
| Best stallion, 1 year old and under 2, J. & T. Barron, Columbus | 10 00 |
| Best brood-mare, 4 years old and over, with foal by her side, J. C. Corrigan, Cedarburg | 30 00 |
| Best filly, 2 years old and under 3, J. C. Corrigan, Cedarburg | 10 00 |

J. B. DAVIS,
J. M. ORMOND,
JAMES LOWELL,
*Committee.*

### CLASS 2.—*Roadsters.*

| | |
|---|---|
| Best stallion, 4 years old and over, C. T. Bradley, Milwaukee | $50 00 |
| Second best, J. B. Hays, Horicon | 25 00 |
| Best stallion, 3 years old and under 4, J. C. Corrigan, Cedarburg | 30 00 |
| Second best, James Calda, Milwaukee | 15 00 |
| Best stallion, 2 years old and under 3, Henry B. Roberts, Racine | 15 00 |
| Second best, C. T. Bradley, Milwaukee | 10 00 |
| Best stallion, 1 year old and under 2, C. T. Bradley, Milwaukee | 10 00 |
| Second best, T. C. Bradley, Milwaukee | 5 00 |
| Best sucking stallion foal, C. T. Bradley, Milwaukee | 10 00 |
| Second best, G. Nicholson, Milwaukee | 5 00 |
| Best brood-mare, 4 years old and over, with foal by her side, T. C. Bradley, Milwaukee | 30 00 |
| Second best, John Ballack, Union Grove | 15 00 |
| Best filly, 3 years old and under 4, C. M. Storey, Summit | 15 00 |
| Second best, E. C. Kane, Milwaukee | 10 00 |
| Best filly, 2 years old and under 3, Frank J. Ayers, Spring Prairie | 10 00 |
| Second best, F. S. Capron, Oconomowoc | 5 00 |
| Best filly, 1 year old and under 2, C. T. Bradley, Milwaukee | 10 00 |
| Second best, C. T. Bradley, Milwaukee | 5 00 |
| Best sucking filly foal, C. T. Bradley, Milwaukee | .... |
| Second best, Edward W. Hincks, National Home | .... |

E. S. WADSWORTH,
S. HAYT,
C. L. PHILLIPS,
*Committee.*

Digitized by Google

## CLASS 3.—*Horses for general purposes.*

| | |
|---|---|
| Best stallion, 4 years old and over, Isaac Anthony, Fond du Lac | $30 00 |
| Second best, Charley Green, Burnett Junction | 15 00 |
| Best stallion, 3 years old and under 4, D. H. Dorman, East Troy | 20 00 |
| Second best, Wm. L. Roy, Hartland | 10 00 |
| Best stallion, 2 years old and under 3, R. Hughes, Watertown | 10 00 |
| Second best, Charley Green, Burnett Junction | 5 00 |
| Best stallion, 1 year old and under 2, A. Z. Blodgett, Waukegan | 8 00 |
| Second best, A. Z. Blodgett, Waukegan | 4 00 |
| Best sucking stallion foal, J. D. Van Doren, Fisk's Corners | 5 00 |
| Second best, David House, Milwaukee | 3 00 |
| Best brood-mare, 4 years old and over, with foal by her side, Ivern Jansen, Oak Creek | 20 00 |
| Second best, F. L. Bell, Greenfield | 10 00 |
| Best filly, 3 years old and under 4, C. T. Bradley, Milwaukee | 15 00 |
| Second best, J. D. Van Doren, Fisk's Corners | 10 00 |
| Best filly, 2 years old and under 3, D. T. Pilgrim, West Granville | 10 00 |
| Best filly, 1 year old and under 2, Chas. Hackbarth, West Granville | 6 00 |
| Second best, A. Rorick, Wauwatosa | 3 00 |
| Best sucking filly foal, Geo. Murray, Racine | 5 00 |
| Second best, Geo. Murray, Racine | 3 00 |

S. HAYT,
H. CROMDALL,
J. C. CORRIGAN,
*Committee.*

## CLASS 4.—*Draft-horses.*

| | |
|---|---|
| Best stallion, 4 years old and over, Geo. Murray, Racine | $30 00 |
| Second best, Waken & Powell, Whitby, Ontario | 15 00 |
| Best stallion, 3 years old and under 4, A. Z. Blodgett, Waukegan | 20 00 |
| Second best, J. M. Roberts, Frankville | 10 00 |
| Best stallion, 2 years old and under 3, G. Richards, Cambria | 10 00 |
| Second best, R. B. Sanderson, Burke | 5 00 |
| Best stallion, 1 year old and under 2, J. D. Van Doren, Fisk's Corners | 8 00 |
| Second best, A. Z. Blodgett, Waukegan | 4 00 |
| Best sucking stallion foal, R. B. Sandersen, Burke | 5 00 |
| Second best, F. L. Bell, Greenfield | 3 00 |
| Best brood mare, 4 years old and over, with foal by her side, Geo. Murray, Racine | 20 00 |
| Second best, R. B. Sandersen, Burke | 10 00 |
| Best filly, 3 years old and under 4, Quincy P. West, Painesville | 16 00 |
| Best filly, 2 years old and under 3, A. Z. Blodgett, Waukegan | 10 00 |
| Second best, J. D. Van Doren, Fisk's Corners | 6 00 |
| Best filly, 1 year old and under 2, Peter Boss, Mukwanago | 6 00 |
| Second best, A. Z. Blodgett, Waukegan | 3 00 |
| Best sucking filly foal, H. Ludington, Milwaukee | 5 00 |

### BREEDERS' SPECIAL PREMIUM $200.

(Offered by George Murray, Robert Ogilvie, and R. B. Sanderson.)

| | |
|---|---|
| Best draft stallion, any age or breed, Geo. Murray, Racine | 60 00 |
| Second best, Wakem and Powell, Whitby, Ontario | 40 00 |
| Best draft-mare, any age or breed, R. B. Sanderson, Burke | 60 00 |
| Second best, Geo. Murray, Racine | 40 00 |

### SPECIAL PREMIUM $100.

(Offered by H. B. Sherman, proprietor Plankinton House, Milwaukee.)

| | |
|---|---|
| Best imported French stallion, 4 years old, H. B. Sherman, Burnett | $25 00 |
| Best French mare, 3 years old, ⅞ bred, with colt by her side, H. B. Sherman, Burnett | 25 00 |

Digitized by Google

Best French mare, 2 years old, ⅞ bred, J. D. Van Doren, Fisk's Corners... $25 00
Best French colt, under 1 year old, ⅞ bred, stallion or filly, H. B. Sherman Burnett ..... 25 00

DAVID McCLAY,
B. MACK,
D. ANDERSON,
*Committee.*

## CLASS 5.—*Jacks and mules.*

Best jack, John Mathews, Darlington ..... $20 00

W. M. ORMOND,
H. MANCHART,
CHAS. ELSON,
*Committee.*

## CLASS 6.—*Matched horses and mares.*

Best pair of carriage-horses or mares, not less than 15½ hands, T. H. Judd, Milwaukee..... $30 00
Second best, H. Kelley, Racine..... 15 00
Best pair of roadsters, Geo. Maloney, Sun Prairie..... 30 00
Second best, Mrs. S. Jeckert, McGregor, Iowa..... 15 00
Best pair farm-horses or mares, R. B. Ogilvie, Madison..... 20 00
Second best, H. B. Sherman, Burnett Junction ..... 10 00
Best pair draft-horses or mares, Geo. W. Slawson, Racine..... 20 00
Second best, H. B. Sherman, Burnett Junction ..... 10 00

S. HAYT,
H. CRANDALL,
J. C. CRANDALL,
*Committee.*

## CLASS 7.—*Geldings or mares for single harness.*

Best gentleman's roadster for single harness, 4 years old and over, Peter Rease, Racine ..... $30 00
Second best, Peter Rease, Racine..... 15 00

S. HAYT,
C. L. PHILLIPS,
E. S. WADSWORTH,
*Committee.*

## CLASS 8.—*Sweepstakes on horses.*

Best stallion, and five of his colts at 4 years of age or under, in hardess or not, at the option of the owner, Geo. Murray, Racine, Grand Silver Medal and..... $100 00
Best brood-mare to be shown by the bridle, with foal by her side, Geo. Murray, Racine, Grand Silver Medal and..... 50 00

S. B. DAVIS,
C. L. PHILLIPS,
RICHARD RICHARDS,
*Committee.*

## CLASS 9.—*Horses for speed.*

Premium $500 for horses that have never trotted better than three minutes, Amos Sawyer, Milwaukee, "Medoc," time 2:42 ..... $300 00
Second best, J. W. Flack, Markesan, "Golden Farmer."..... 125 00
Third best, Amos Sawyer, Milwaukee ..... 75 00



Digitized by Google

Premium $200, for all runners, William Hall, Medina, "Sewana." .. ... $150 00
Second best, Thomas McEntee, "Little Frank." ..... 50 00
Premium $700, free for all trotters, O. M. Brown, Racine, "Phil Sheridan," time 2:26 ¼ ..... 400 00
Second best, J. S. Rowell, Beaver Dam, "Badger Girl." ..... 200 00
Premium $300, for all runners, Thomas McEntee, Lacon, Ill., "Little Frank," time 1:52 ¼ ..... 200 00
Second best Wm. Hall, Medina, "Sewana." ..... 100 00
Premium $500, $250 purse, J. W. Flack, Markesan, "Golden Farmer," time 2:41 ¾ ..... 300 00
Second best, Geo. Webber, Milwaukee, "Fanny." ..... 125 00
Third best, I. V. Palmer, Sparta, Weazel." ..... 75 00

S. B. DAVIS,
GEO. A. MASON,
JAS. VAN ETTA,
H. C. McDOWELL,
*Committee.*

---

## DEPARTMENT B.—CATTLE.

### CLASS 10.—*Short-horns.*

Best bull, 4 years old and over, Geo. Murray, Racine ..... $30 00
Second best, Eli Stilson, Oshkosh ..... 20 00
Best bull, 3 years old and over, Ira B. Babcock, Mauston ..... 30 00
Best bull, 2 years old and under 3, Geo. Murray, Racine .. ..... 30 00
Second best, Eli Stilson, Oshkosh ..... 15 00
Best bull, 1 year old and under 2, R. M. Grough, Milwaukee ..... 30 00
Second best, Geo. Murray, Racine ..... 15 00
Best bull calf, over 6 and under 12 months, Eli Stilson, Oshkosh ..... 15 00
Second best, Geo. Harding, Waukesha ..... 10 00
Best bull calf, under 6 months, Geo. Murray, Racine ..... 15 00
Second best, J. C. Mitchem, Genesee ..... 10 00
Best cow, 4 years old and over, Geo. Murray, Slausondale ..... 25 00
Second best, Geo. Murray, Slasoundale ..... 15 00
Best cow, 3 years old and over, Geo. Murray, Slausondale ..... 25 00
Second best, Geo. Murray, Slansondale ..... 15 00
Best heifer, 2 years old and under 3, Geo. Murray, Slausondale ..... 25 00
Second best, J. C. Mitchem, Genesee ..... 15 00
Best heifer, 1 year old and under 2, Geo. Murray, Slausondale ..... 25 00
Second best, Eli Stilson, Oshkosh ..... 15 00
Best heifer calf, 6 and under 12 months, Geo. Murray, Slausondale ..... 10 00
Second best, Eli Stilson, Oshkosh ..... 5 00
Best heifer calf, under 6 months, Geo. Murray, Slausondale ..... 10 00
Second best, E. & J. Smith, Rochester ..... 5 00

SPECIAL PREMIUM.

Best herd of short-horns—one bull and four cows or heifers over 2 years old, owned in the State and not competing for the herd-premium offered by Society, Geo. Murray, Slausondale ... ..... 50 00
Second best, J. C. Mitchem, Genesee ..... 20 00

CLINTON BABBETT,
WM. STOREY,
WILLARD BLANCHARD,
*Committee.*

Digitized by Google

## CLASS 11.—*Devons.*

| | |
|---|---|
| Best bull, 4 years old and over, Luther Rawson, Oak Creek | $20 00 |
| Best bull, 3 years old and over, J. J. Ross, Mineral Point | 20 00 |
| Best bull, 2 years old and under 3, Wm. T. Smith, Elkhorn | 20 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best bull, 1 year old and under 2, Luther Rawson, Oak Creek | 20 00 |
| Second best, Michael Ferrick, Wauwatosa | 10 00 |
| Best bull calf, over 6 months and under 12 months, Luther Rawson, Oak Creek | 10 00 |
| Second best, Luther Rawson, Oak Creek | 5 00 |
| Best bull calf, under 6 months, Luther Rawson, Oak Creek | 10 00 |
| Second best, Luther Rawson, Oak Creek | 5 00 |
| Best cow, 4 years old and over, Wm. T. Smith, Elkhorn | 15 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best cow, 3 years old and over, Luther Rawson, Oak Creek | 15 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best heifer, 2 years old and under 3, Luther Rawson, Oak Creek | 15 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best heifer, 1 year old and under 2, Luther Rawson, Oak Creek | 15 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best heifer calf, over 6 and under 12 months, Luther Rawson, Oak Creek | 6 00 |
| Second best, Luther Rawson, Oak Creek | 3 00 |
| Best heifer calf, under 6 months, Luther Rawson, Oak Creek | 6 00 |
| Second best, Luther Rawson, Oak Creek | 3 00 |

WM. HORN,
CHARLES CLARK,
*Committee.*

## CLASS 12.—*Ayrshires.*

| | |
|---|---|
| Best bull, 4 years old and over, Grand Chute Club, Appleton | $20 00 |
| Best bull, 3 years old and over, Chester Hazen, Ladoga | 20 00 |
| Second best, D. Huntley, Appleton | 10 00 |
| Best bull, 2 years old and under 3, J. Johnson, Hartland | 20 00 |
| Second best, Johnathan Stoddard, Greenbush | 10 00 |
| Best bull, 1 year old and under 2, Johnathan Stoddard, Greenbush | 20 00 |
| Second best, J. Johnson, Hartland | 10 00 |
| Best bull calf, over 6 months and under 12 months, James McNee, Emerald Grove | 10 00 |
| Second best, Johnathan Stoddard, Greenbush | 5 00 |
| Best bull calf, under 6 months, J. Johnson, Hartland | 10 00 |
| Second best, D. Huntley, Appleton | 5 00 |
| Best cow, 4 years old and over, Chester Hazen, Ladoga | 15 00 |
| Second best, James McNee, Emerald Grove | 10 00 |
| Best cow, 3 years old and over, D. Huntley, Appleton | 15 00 |
| Second best, James McNee, Emerald Grove | 10 00 |
| Best heifer, 2 years old and under 3, James McNee, Emerald Grove | 15 00 |
| Second best, Johnathan Stoddard, Greenbush | 10 00 |
| Best heifer, 1 year old and under 2, Chester Hazen, Ladoga | 15 00 |
| Second best, James McNee, Emerald Grove | 10 00 |
| Best heifer calf over 6 and under 12, | .... |
| Second best, Chester Hazen, Ladoga | 3 00 |
| Best heifer calf under 6 months, D. Huntley, Appleton | 6 00 |
| Second best James McNee, Emerald Grove | 3 00 |

WM. HORN,
CHARLES CLARK,
M. L. BUTTERFIELD,
*Committee.*

Digitized by Google

## CLASS 13.—*Jerseys.*

Best bull, 4 years old and over, Grand Chute Club, Appleton.....$20 00
Second best, Frederick Kleebler, Menomonee Falls..... 10 00
Best bull, 3 years old and over, Chester Hazen, Ladoga..... 20 00
Best bull, 1 year old and under 2, H. G. Durand, Racine..... 20 00
Best bull calf under six months, Frederick Kleebler, Menomonee Falls..... 10 00
Second best H. G. Durand, Racine..... 5 00
Best cow, 4 years old and over, Frederick Kleebler, Menomonee Falls..... 15 00
Second best H. G. Durand, Racine..... 10 00
Best cow, 3 years old and over, H. G. Durand, Racine..... 15 00
Second best ..... 10 00
Best heifer, two years old and under 3, H. G. Durand, Racine..... 15 00
Second best, Frederick Kleebler, Menomonee Falls..... 10 00
Best heifer, 1 year old and under two, H. G. Durand, Racine..... 15 00
Best heifer calf under six months, Geo. E. Bryant, Madison..... 6 00
Second best, H. G. Durand, Racine..... 3 00

WM. HORN,
CHARLES CLARK,
M. L. BUTTERFIELD.
*Committee.*

## CLASS 14.—*Galloways.*

Best exhibition, not less than 6 head, Peter Davy, Ashippon.....$60 00

WM. HORN,
CHARLES CLARK,
M. L. BUTTERFIELD,
*Committee.*

## CLASS 15.—*Grade-cattle and working-oxen.*

Best grade cow, 4 years old and over, E. & J. Smith, Rochester.....$15 00
Second best, John Mathews, Darlington..... 10 00
Best grade cow, 3 years old, E. & J. Smith, Rochester..... 15 00
Second best, John Mathews, Darlington..... 10 00
Best heifer, 2 years old and under 3, E. & J. Smith, Rochester..... 15 00
Second best, E. & J. Smith, Rochester..... 10 00
Best yearling heifer, E. & J. Smith, Rochester..... 15 00
Second best, John Mathews, Darlington..... 10 00
Best heifer calf over 6 months, Eli Stilson, Oshkosh..... 6 00
Second best, Jas. H. Nelson & Sons, Shafford..... 3 00
Best yoke working-oxen, Wm. Miller, Milwaukee..... 20 00
Second best, Reuben Strong, Milwaukee..... 10 00
Best yoke 3 year old steers, Luther Rawson, Oak Creek..... 15 00

WM. HORN,
CHARLES CLARK,
L. M. BUTTERFIELD,
*Committee.*

## CLASS 16.—*Milch-cows.*

Best milch cow of any breed, 4 years old and over, M. S. Butterfield, Waukesha.....$25 00
Second best, E. & J. Smith, Rochester..... 15 00
Best milch cow of any breed, 3 years and under 4, M. S. Butterfield, Waukesha..... 25 00
Second best, D. Huntley, Appleton..... 15 00

WM. HORN,
CHARLES CLARK,
M. L. BUTTERFIELD,
*Committee.*

Digitized by Google

## CLASS 18.—*Herds.*

| | |
|---|---|
| Best bull and 4 cows or heifers over 2 years, Geo. Murray, Slausondale | $100 00 |
| Second best, Eli Stilson, Oshkosh | 60 00 |
| Third best, H. Ludington, Milwaukee | 40 00 |
| Best bull and 4 heifers, under two years, Geo. Murray, Slausondale | 100 00 |
| Second best, Eli Stilson, Oshkosh | 60 00 |
| Third best, E. & J. Smith, Rochester | 40 00 |
| Best four calves, to be bred and owned by the exhibitor in State, Geo. Murray, Slausondale | 40 00 |
| Second best, Eli Stilson, Oshkosh | 30 00 |
| Third best, H. Ludington, Milwaukee | 20 00 |

OPEN TO DEVONS, AYRSHIRES, AND JERSEYS.

| | |
|---|---|
| Best bull and 4 cows or heifers over 2 years old, J. Johnson, Hartland | 60 00 |
| Second best, L. Rawson, Oak Creek | 40 00 |
| Third best, H. G. Durand, Racine | 20 00 |

CLINTON BABBITT,
WM. STOREY,
ROBT. SANDERSON,
*Committee*

SWEEPSTAKES.

| | |
|---|---|
| Best bull of any age, Geo. Murray, Slausondale | $50 00 |
| Second best, Geo. Murray, Slausondale | 25 00 |
| Best cow or heifer of any age, Geo. Murray, Slausondale | 40 00 |
| Second best, Geo. Murray, Slausondale | 20 00 |

ROBERT OGILVIE,
W. BLANCHARD,
WM. MILLER,
SAMUEL TENNEY,
*Committee.*

---

# DEPARTMENT C.—SHEEP.

## CLASS 19.—*American merinos.*

| | |
|---|---|
| Best buck, 2 years old and over, J. H. Paul, Genesee | $20 00 |
| Second best, E. N. Bissell, Shoreham, Vermont | 10 00 |
| Best buck, 1 year old and under 2, J. H. Paul, Genesee | 15 00 |
| Second best, Geo. Lawrence, Jr., Waukesha | 10 00 |
| Best pen of 3 buck lambs, J. H. Paul, Genesee | 10 00 |
| Second best, G. Lawrence, Waukesha | 5 00 |
| Best pen of 10 ewes, 2 years and over, J. H. Paul, Genesee | 30 00 |
| Second best, Geo. Lawrence, Jr., Waukesha | 15 00 |
| Best pen of 3 ewes, 2 years and over, O. Cook, Whitewater | 20 00 |
| Second best, A. & P. Humbert, Caldwell's Prairie | 10 00 |
| Best pen of 10 ewes, 1 year and under 2, O. Cook, Whitewater | 20 00 |
| Second best, J. H. Paul, Genesee | 15 00 |
| Best pen of 3 ewes, 1 year and under 2, Perry Craig, Caldwell's Prairie | 15 00 |
| Second best, A. & P. Humbert, Caldwell's Prairie | 10 00 |
| Best pen of 10 ewe lambs, J. H. Paul, Genesee | 20 00 |
| Second best, Geo. Lawrence, Jr., Waukesha | 10 00 |
| Best pen of 3 ewe lambs, A. & P. Humbert, Caldwell's Prairie | 10 00 |
| Second best, Geo. Lawrence | 5 00 |

DANIEL KELLEY,
M. H. AYERS,
E. S. HAMMOND,
E. N. BISSELL,
*Committee.*

Digitized by Google

## CLASS 20.—*Long-wool.*

| | |
|---|---|
| Best buck, 2 years old and over, Wakem & Powell, Whitby, Ontario | $20 00 |
| Second best, Wm. Lysaght, Bellville | 10 00 |
| Best buck, 1 year old and under 2, G. A. Fox, Waukesha | 15 00 |
| Second best, Wakem & Powell, Whitby, Ontario | 10 00 |
| Best pen of 3 buck lambs, Wm. Lysaght, Bellville | 10 00 |
| Second best, Wakem & Powell, Whitby, Ontario | 5 00 |
| Best pen of 10 ewes, 2 years old and over, Wm. Lysaght, Bellville | 30 00 |
| Second best, J. J. Ross, Mineral Point | 15 00 |
| Best pen of 3 ewes, 2 years old and over, Wm. Lysaght, Bellville | 20 00 |
| Second best, Wakem & Powell, Whitby, Ontario | 10 00 |
| Best pen of 10 ewes, 1 year old and under 2, Wakem & Powell, Whitby, Ont. | 20 00 |
| Second best, G. A. Fox, Waukesha | 10 00 |
| Best pen of 3 ewes, 1 year old and under 2, J. J. Ross, Mineral Point | 15 00 |
| Second best, Geo. Harding, Waukesha | 10 00 |
| Best pen of 10 ewe lambs, Wm. Lysaght, Bellville | 20 00 |
| Second best, G. A. Fox, Waukesha | 10 00 |
| Best pen of 3 ewe lambs, Wm. Lysaght, Bellville | 10 00 |
| Second best, Wakem & Powell, Whitby, Ontario | 5 00 |
| Best exhibition of sheep, Wm. Lysaght, Bellville | Diploma. |

SEYMOUR BROOKS,
W. H. FOX,
JOSEPH COOK,
*Committee.*

## CLASS 21.—*Southdowns.*

| | |
|---|---|
| Best buck, 2 years old and over, Wakem & Powell, Whitby, Ontario | $20 00 |
| Second best, G. H. Daubner, Brookfield Center | 10 00 |
| Best buck, 1 year old and under 2, Wakem & Powell, Whitby, Ontario | 15 00 |
| Second best, G. H. Daubner, Brookfield Center | 10 00 |
| Best pen of 3 buck lambs, G. H. Daubner, Brookfield | 10 00 |
| Second best, Wakem & Powell, Whitby, Ont. | 5 00 |
| Best pen of 10 ewes, 2 years and over, G. H. Daubner, Brookfield Center | 30 00 |
| Best pen of 3 ewes, 2 years old and over, Luther Rawson, Oak Creek | 20 00 |
| Second best, Luther Rawson, Oak Creek | 10 00 |
| Best pen of 10 ewes, 1 year old and under 2, Luther Rawson, Oak Creek | 20 00 |
| Best pen of 3 ewes, 1 year old and under 2, Wakem & Powell, Whitby, Ont. | 20 00 |
| Second best, C. C. Hatchard, Kingston | 10 00 |
| Best pen of 10 ewe lambs, G. H. Daubner, Brookfield Center | 20 00 |
| Best pen of 3 ewe lambs, Luther Rawson, Oak Creek | 10 00 |
| Second best, G. H. Daubner, Brookfield Center | 5 00 |
| Best exhibition of sheep, G. H. Daubner, Brookfield | Diploma. |

---

# DEPARTMENT D.—SWINE.

## CLASS 22.—*Large breeds, including Poland-chinas, Chester-whites, and others.*

| | |
|---|---|
| Best boar, 2 years old and over, W. W. Ellsworth, Woodstock, Illinois | $15 00 |
| Best boar, 1 year old and under 2, W. W. Ellsworth, Woodstock, Illinois | 10 00 |
| Second best, W. W. Woodward, Good Hope | 5 00 |
| Best breeding-sow, 2 years old and over, W. W. Ellsworth, Woodstock, Ill. | 15 00 |
| Second best, W. W. Ellsworth, Woodstock, Illinois | 10 00 |

Digitized by Google

| | |
|---|---|
| Best breeding-sow, 1 year old and under 2, W. W. Ellsworth, Woodstock, Ill.. | $10 00 |
| Second best, Gen. Ed. W. Hinks, National Home | 5 00 |
| Best breeding-sow, with litter of pigs, not less than 4, W. W. Ellsworth, Woodstock, Illinois | 15 00 |
| Second best, W. W. Ellsworth, Woodstock, Illinois | 10 00 |
| Best sow pig, over 6 months and under 1 year old, C. R. Nichols | 8 00 |
| Second best, Henry Linub, Brookfield | 4 00 |
| Best boar pig, under 6 months old, W. W. Ellsworth, Woodstock, Illinois.. | 8 00 |
| Second best, W. W. Ellsworth, Woodstock, Illinois | 4 00 |
| Best sow pig under six months old, W. W. Ellsworth, Woodstock, Illinois... | 8 00 |
| Second best, W. W. Ellsworth, Woodstock, Illinois | 4 00 |

SMALL BREEDS, INCLUDING ESSEX, SUFFOLKS, AND OTHERS.

| | |
|---|---|
| Best boar, 2 years old and over, J. D. Van Doren, Fisk's Corners | 10 00 |
| Second best, John Jeffers, Darien | 15 00 |
| Best boar, 1 year old and under 2, John Jeffers, Darien | 10 00 |
| Second best, Seymour Brooks, East Troy | 5 00 |
| Best breeding-sow, 2 years old and over, John Jeffers, Darien | 15 00 |
| Second best, J. C. Davis, Oshkosh | 10 00 |
| Best breeding-sow, 1 year old and under 2, Seymour Brooks, East Troy | 10 00 |
| Second best, John Jeffers, Darien | 5 00 |
| Best breeding-sow, with litter of pigs, not less than 4, Seymour Brooks, East Troy | 15 00 |
| Second best, J. D. Van Doren, Fisk's Corners | 10 00 |
| Best boar pig over 6 months and under 1 year old, John Jeffers, Darien | 8 00 |
| Best sow pig, over 6 months and under 1 year old, John Jeffers, Darien | 8 00 |
| Best boar pig, under 6 months old, John Jeffers, Darien | 8 00 |
| Second best, Geo. P. Peffer Pewaukee | 4 00 |
| Best sow pig, under 6 months old, Geo. P. Peffer, Pewaukee | 8 00 |
| Second best, Seymour Brooks, East Troy | 4 00 |

MIDDLE BREEDS, INCLUDING BERKSHIRES.

| | |
|---|---|
| Best boar, 2 years old and over, C. C. Hatchard, Kingston | 15 00 |
| Second best, J. C. Mitchem, Genesee | 10 00 |
| Best boar, 1 year old and under 2, Wm. Lysaght, Bellville | 10 00 |
| Second best, James Magson, Walworth | 5 00 |
| Best breeding-sow, 2 years old and over, Wm. Lysaght, Bellville | 15 00 |
| Second best Wm. Storey, Rosendale | 10 00 |
| Best breeding-sow, 1 year old and under 2, Wm. Lysaght, Bellville | 10 00 |
| Second best, James Magson, Walworth | 5 00 |
| Best breeding-sow and litter of pigs, not less than 4, Wm. Lysaght, Bellville. | 15 00 |
| Second best, James Magson, Walworth | 10 00 |
| Best boar pig over 6 months and under 1 year, C. C. Hatchard, Kingston | 8 00 |
| Second best, M. Towers, Omro | 4 00 |
| Best sow pig, over 6 months and under 1 year, Wm. Lysaght, Bellville | 8 00 |
| Second best, Wm. Lysaght, Bellville | 4 00 |
| Best boar pig, under 6 months old, Wm. Storey, Rosendale | 8 00 |
| Second best, James Magson, Walworth | 4 00 |
| Best sow pig, under 6 months old, Wm. Storey, Rosendale | 8 00 |
| Second best, James Magson, Walworth | 4 00 |

SPECIAL PREMIUMS.

| | |
|---|---|
| Best boar of any age, W. W. Ellsworth, Woodstock, Ill | 25 00 |
| Best sow of any age, Wm. Lysaght, Bellville | 25 00 |
| Best 6 pigs, under 8 months, Wm. Storey, Rosendale | 10 00 |
| Best boar and sow of any age and breed, with 5 pigs of same breed, not over 8 months old, W. W. Ellsworth, Woodstock, Ill | 40 00 |

WM. M. FAY,
L. B. POTTER,
R. B. ALLEN,
*Committee.*

Digitized by Google

## DEPARTMENT E.—POULTRY.

### CLASS 23.—*Poultry, Asiatic.*

| | |
|---|---|
| Best trio light brahmas. W. W. Ellsworth, Woodstock, Ill. | $2 50 |
| Second best, W. W. Ellsworth, Woodstock, Ill. | 1 50 |
| Best trio dark brahmas, P. A. Van Vrankin, Wauwatosa. | 2 50 |
| Second best, J. B. Judson, Milwaukee. | 1 50 |
| Best trio buff cochins, P. A. Van Vrankin, Wauwatosa. | 2 50 |
| Second best, Leon Howard, Milwaukee. | 1 50 |
| Best trio partridge cochins, H. D. Gardner, Milwaukee. | 2 50 |
| Second best, P. A. Van Vrankin, Wauwatosa. | 1 50 |

GAME.

| | |
|---|---|
| Best trio pyle, E. P. Richardson, Milwaukee | 2 50 |
| Second best, E. P. Richardson, Milwaukee. | 1 50 |

FRENCH.

| | |
|---|---|
| Best trio Houdans, P. A. Van Vrankin, Wauwatosa. | 2 50 |
| Second best, P. A. Van Vrankin, Wauwatosa. | 1 50 |

SPANISH.

| | |
|---|---|
| Best trio black, (white-face,) H. D. Gardner, Milwaukee | 2 50 |
| Second best, H. D. Gardner, Milwaukee. | 1 50 |
| Best trio White Leghorns, Leon Howard, Milwaukee. | 2 50 |
| Second best, Leon Howard, Milwaukee. | 1 50 |
| Best trio B. B. red game, H. D. Gardner, Milwaukee. | 2 50 |
| Second best, H. D. Gardner, Milwaukee. | 1 50 |

TURKEYS.

| | |
|---|---|
| Best pair bronze turkeys, M. Robinson, Wauwatosa. | 2 50 |
| Second best, M. Robinson, Wauwatosa. | 1 50 |

WATER-FOWLS.

| | |
|---|---|
| Best pair African geese, Mrs. J. A. Ladd, Milwaukee | 2 50 |
| Second best, Thomas Ladd, Milwaukee. | 1 50 |
| Best pair Aylesbury ducks, P. A. Van Vrankin, Wauwatosa | 2 50 |
| Second best, P. A. Van Vrankin, Wauwatosa. | 1 50 |
| Best pair Rouen ducks, Freddie Merrill, Milwaukee. | 2 50 |
| Best and greatest variety of poultry shown by one person, P. A. Van Vrankin, Wauwatosa. | Grand Silver Medal. |
| Best exhibition of fancy pigeons, Frank German, Milwaukee. | 5 00 |

C. B. W. RYCKMAN,
E. S. McBRIDE,
FRANK M. DORN,
*Committee.*

Digitized by Google

## DEPARTMENT F.—AGRICULTURE.

### CLASS 24.—*Field-Products.*

| | |
|---|---|
| Best sample spring wheat, (club,) J. C. Davis, Oshkosh | $7 00 |
| Second best, F. C. Curtis, Rocky Run | 4 00 |
| Best sample spring wheat, (Rio Grande or China tea,) Luther Rawson, Oak Creek | 7 00 |
| Second best, J. C. Davis, Oshkosh | 4 00 |
| Best sample spring wheat, (fife,) D. T. Pilgrim, West Granville | 7 00 |
| Second best, H. Boorse, Granville | 4 00 |
| Best Odessa or other variety, D. T. Pilgrim, West Granville | 7 00 |
| Second best, Geo. P. Peffer, Pewaukee | 4 00 |
| Best white winter wheat, J. W. Wood, Baraboo | 7 00 |
| Second best, Stephen Wiseman, Omro | 4 00 |
| Best rye, J. W. Wood, Baraboo | 5 00 |
| Second best, H. Boorse, Milwaukee | 3 00 |
| Best white oats, D. T. Pilgrim, West Granville | 5 00 |
| Second best, J. W. Wood, Baraboo | 3 00 |
| Best black oats, D. T. Pilgrim, West Granville | 5 00 |
| Second best, J. W. Wood, Baraboo | 3 00 |
| Best barley, J. W. Wood, Baraboo | 5 00 |
| Second best, J. W. Wood, Baraboo | 3 00 |
| Best buckwheat, J. C. Davis, Oshkosh | 5 00 |
| Second best, J. W. Wood, Baraboo | 3 00 |
| Best flax-seed, D. T. Pilgrim, West Granville | 5 00 |
| Second best, F. Bureau, West Granville | 3 00 |
| Best hops, (sack,) N. W. Dean, Madison | 5 00 |
| Second best, R. B. Allen, Hartland | 3 00 |
| Best timothy-seed, J. W. Wood, Baraboo | 5 00 |
| Second best, Luther Rawson, Oak Creek | 3 00 |
| Best clover seed, D. T. Pilgrim, West Granville | 5 00 |
| Second best, Wm. Reid, North Prairie | 3 00 |
| Best peas, J. W. Wood, Baraboo | 5 00 |
| Second best, D. T. Pilgrim, West Granville | 3 00 |
| Best beans, D. T. Pilgrim, West Granville | 5 00 |
| Second best, R. Putnam, Dodge's Corners | 3 00 |
| Best dent corn,(yellow,) Jacob Lysaph, Brookfield | 5 00 |
| Second best, D. T. Pilgrim, West Granville | 3 00 |
| Best flint corn, (white,) J. C. Davis, Oshkosh | 5 00 |
| Second best P. Putnam, Dodge's Corners | 3 00 |
| Best flint corn,(yellow,) J. C. Davis, Oshkosh | 5 00 |
| Second best D. T. Pilgrim, West Granville | 3 00 |
| Best ten pounds tobacco, N. W. Dean, Madison | 5 00 |
| Second best, D. T. Pilgrim, West Granville | 3 00 |
| Best six pumpkins, D. T. Pilgrim, West Granville | 5 00 |
| Second best, P. Putnam, Dodge's Corners | 3 00 |
| Best exhibition field products, D. T. Pilgrim, West Granville, Grand Silver Medal and | 20 00 |
| Second best, J. W. Wood, Baraboo | 15 00 |

SPECIAL PREMIUM OFFERED BY MILWAUKEE CHAMBER OF COMMERCE.

| | |
|---|---|
| Best bushel spring wheat, D. T. Pilgrim, West Granville | 25 00 |
| Best bushel winter wheat, J. W. Wood, Baraboo | 25 00 |

G. W. BEMIS,
C. H. JACOBS,
AMAZIAH SHERMAN,
*Committee.*

Digitized by Google

## CLASS 25.—*Garden and vegetable produce.*

| | |
|---|---|
| Best early-rose potatoes, E. T. Sercome, Milwaukee | $3 00 |
| Second best, Luther Rawson, Oak Creek | 2 00 |
| Best any other variety early potatoes, Mrs. F. M. Vilas, Madison | 3 00 |
| Second best, C. C. Hatchard, Kingston | 2 00 |
| Best peachblows, J. B. Cross, Milwaukee | 3 00 |
| Second best, D. T. Pilgrim, West Granville | 2 00 |
| Best any other variety late potatoes, Mrs. F. M. Vilas, Madison | 3 00 |
| Second best, Wm. Reid, North Prairie | 2 00 |
| Best four quarts lima beans, D. T. Pilgrim, West Granville | 3 00 |
| Best blood turnip-beets, J. W. Ringrose, Wauwatosa | 3 00 |
| Second best, L. Ziemer, Milwaukee | 2 00 |
| Best mangel-wurtzel, J. W. Wood, Baraboo | 3 00 |
| Second best, O. J. Smith, Wauwatosa | 2 00 |
| Best long blood-beet, G. W. Ringrose, Wauwatosa | 3 00 |
| Second best, L. Ziemer, Milwaukee | 2 00 |
| Best red Wethersfield onions, E. T. Sercombe, Milwaukee | 3 00 |
| Second best, J. M. Smith, Green Bay | 2 00 |
| Best yellow Danvers onions, J. M. Smith, Green Bay | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best any other variety onions, J. M. Smith, Green Bay | 3 00 |
| Second best, G. W. Ringrose, Wauwautosa | 2 00 |
| Best drum-head cabbage, J. M. Smith, Green Bay | 3 00 |
| Second best, James Eager, Milwaukee | 2 00 |
| Best 3 Winningstadt cabbage, L. Zierner, Milwaukee | 3 00 |
| Second best, E. T. Sercombe, Milwaukee | 2 00 |
| Best long orange-carrots, L. Zierner, Milwaukee | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best horn-carrots, J. M. Smith, Green Bay | 3 00 |
| Second best, James Eager, Milwaukee | 2 00 |
| Best head cauliflower, Geo. Jeffery, Five-Mile House | 3 00 |
| Second best, G. W. Ringrose, Waawatosa | 2 00 |
| Best 10 heads celery, L. Zierner, Milwaukee | 3 00 |
| Second best, James Eager, Milwaukee | 2 00 |
| Best 12 ears early sweet-corn, R. Putnam, Dodge's Corners | 3 00 |
| Second best, D. T. Pilgrim, West Granville | 2 00 |
| Best 12 ears late sweet-corn, D. T. Pilgrim, West Granville | 3 00 |
| Second best, George Jeffery, Five-Mile House | 2 00 |
| Best sample egg-plant, L. Zierner, Milwaukee | 3 00 |
| Best 6 watermelons, E. Elliot, Lone Rock | 3 00 |
| Second best, J. M. Smith, Green Bay | 2 00 |
| Best 6 nutmeg-melons, J. M. Smith, Green Bay | 3 00 |
| Best parsnips, L. Zierner, Milwaukee | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best 12 large red-peppers, G. W. Ringrose, Wauwatosa | 3 00 |
| Second best, D. T. Pilgrim, West Granville | 2 00 |
| Best peck vegetable-oysters, J. M. Smith, Green Bay | 3 00 |
| Second best, C. D. Richards, Milwaukee | 2 00 |
| Best 6 Hubbard squashes, L. Zierner, Milwaukee | 3 00 |
| Second best, R. Putnam, Dodge's Corners | 2 00 |
| Largest squash of any variety, E. Elliott, Lone Rock | 3 00 |
| Second best, D. T. Pilgrim, West Granville | 2 00 |
| Best tomatoes, N. W. Dean, Madison | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best flat turnips, L. Zierner, Milwaukee | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best ruta-bagas, Wm. Reid, North Prairie | 3 00 |
| Second best, G. W. Ringrose, Wauwatosa | 2 00 |
| Best exhibition by one exhibitor, D. T. Pilgrim, West Granville | 15 00 |
| Second best, J. M. Smith, Green Bay | 10 00 |
| Third best, L. Zierner, Milwaukee | 5 00 |

C. H. JACOBS,
AMAZIAH SHERMAN,
*Committee.*

Digitized by Google

## CLASS 26.—*Products of the flouring-mill, dairy, and apiary.*

| | |
|---|---|
| Best barrel winter-wheat flower, Madison City Mills.....Silver Medal and | $10 00 |
| Second best, Madison City Mills | 10 00 |
| Best barrel spring-wheat flower, Edward Sanderson, Mil...Silver Medal and | 10 00 |
| Second best, Edmund Sanderson, Milwaukee | 10 00 |
| Best 20 pounds butter made in May, S. J. Gordwin, Beloit | 25 00 |
| Second best, H. S. Durand, Racine | 20 00 |
| Third best Johnathan Stoddard, Greenbush | 15 00 |
| Best 20 pounds butter made in June, R. S. Houston, Kenosha | 25 00 |
| Second best, Johnathan Stoddard, Greenbush | 20 00 |
| Third best, H. G. Durand, Racine | 15 00 |
| Best 20 pounds butter made in July, H. G. Durand, Racine | 25 00 |
| Second best, R. S. Houston, Kenosha | 20 00 |
| Third best, M. C. Jones, Fort Atkinson | 15 00 |

SWEEPSTAKES.

| | |
|---|---|
| Best 60 pounds, 20 pounds to be made in each of the above-named months, H. G. Durand, Racine | Grand Silver Medal. |
| Best 2 cheeses made June 16, S. Littlefield, Plymouth | 25 00 |
| Second best, E. G. Stannard, Woodworth | 20 00 |
| Third best, Hebron Cheese Factory, Hebron | 15 00 |
| Fourth best, Hiram Conover, Plymouth | 10 00 |
| Best 2 cheeses made July 16, Hiram Conover, Plymouth | 25 00 |
| Second best, Wm. Crosby & Co., Cascade | 20 00 |
| Third best, S. Littlefield, Plymouth | 15 00 |
| Fourth best, M. A. Robbins, Burseville | 10 00 |
| Best 2 cheeses made August 16, S. Littlefield, Plymouth | 25 00 |
| Second best, Chester Hazen, Lodoga | 20 00 |
| Third best, Wauwatosa Cheese Company | 15 00 |
| Fourth best, Hebron Cheese Factory, Hebron | 10 00 |
| Best 6 cheeses, 2 made the 16th day of each month above named, S. Littlefield, Plymouth | Grand Silver Medal. |

Credit is due for the large and very rich display of fine cheese which were placed on exhibition, and the committee agree that the uniform good quality of the stock is a high mark of credit to the State as a cheese producing and manufacturing district, and for a new State, ranks with the best in the Union.

The display of butter was very creditable, and several of the specimens were very choice. Sufficiently so to establish the fact that as good butter can be made in Wisconsin as elsewhere, with the same care and attention.

The old pioneer cheese-press on exhibition, represented very vividly the inconvenience to which cheese-makers were put to in pressing cheese in the days gone by; and in contrast the very convenient, tidy, and praiseworthy, "Fraser Gang-Press" is recommended to the attention of dairymen.

Wells, Richardson & Co.'s Golden Extract of Annatto, *very beautiful, a very diffusive* substance, and in our opinion very desirable for coloring of butter and cheese, and for purity and firmness from sediment unsurpassed.

Very respectfully submitted.

A. V. BISHOP,
H. A. BOGARDUS,
O. S. BLISS,
WALTER CARR,
E. W. JONES,
*Committee.*

Digitized by Google

SAMPLES OF HONEY AND SUGAR.

| | |
|---|---|
| Best sample 10 pounds of honey, J. B. Cross, Milwaukee | $10 00 |
| Second best, A. H. Hart, Appleton | 5 00 |
| Best extracted honey, A. H. Hart, Appleton | 5 00 |
| Best method of handling bees, A. H. Hart, Appleton | 10 00 |
| Best Italian bees, A. H. Hart, Appleton | 5 00 |
| Best 10 pounds maple sugar, N. N. Cornwell, Wauwatosa | 5 00 |
| Best gallon maple syrup, James Orarme | 5 00 |

A. G. RYE,
STEPHEN FAVILL,
R. S. HOUSTON,
*Committee.*

## CLASS 27.—*Household products.*

BREAD AND CAKE.

| | |
|---|---|
| Best 2 loaves graham bread, Mrs. Jane Warner, Milwaukee | $3 00 |
| Best 2 loaves white bread, (hop-yeast,) Mrs. Mary Bell, Greenfield | 3 00 |
| Best 2 loaves white bread, (milk-raising,) Mrs. Jane Warner, Milwaukee | 3 00 |
| Best sponge-cake, Miss Julia M. Fulson, Milwaukee | 2 00 |
| Best gold and silver cake, Mrs. Jane Warner, Milwaukee | 2 00 |
| Best fruit-cake, Mrs. Jane Warner, Milwaukee | 2 00 |
| Best and largest exhibition of articles of above sorts, Mrs. Jane Warner, Milwaukee | Silver Medal. |

SEALED AND PRESERVED FRUITS AND PICKLES.

| | |
|---|---|
| Best canned peaches, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned plums, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned currants, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned tomatoes, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned gooseberries, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned raspberries, Mrs. C. H. Root, Ripon | 2 00 |
| Best canned strawberries, Mrs. C. H. Root, Ripon | 2 00 |
| Best preserved peaches, Geo. Holgate & Co., Oshkosh | 2 00 |
| Best preserved plums, Mrs. C. H. Root, Ripon | 2 00 |
| Best preserved apples, Mrs. C. H. Root, Ripon | 2 00 |
| Best apple-butter, Mrs. C. H. Root, Ripon | 2 00 |
| Best raspberry jam, Mrs. C. H. Root, Ripon | 2 00 |
| Best blackberry jam, Mrs. C. H. Root, Ripon | 2 00 |
| Best sour crab-apple jam, Mrs. C. H. Root, Ripon | 2 00 |
| Best pickled watermelon, Mrs. C. A. Fulsom, Milwaukee | 2 00 |
| Best tomato-catsup, Mrs. C. A. Fulsom, Milwaukee | 2 00 |
| Best and largest exhibition of articles above specified, factory-made, and in glass jars, Mrs. C. H. Root, Ripon | Silver medal. |

MARY E. THOMAS,
AGGIE J. CLARK,
MRS. A. H. CUTTING,
*Committee.*

Digitized by Google

## DEPARTMENT G.—FRUITS AND FLOWERS.

### CLASS 28.—*Fruits by professional cultivators.*

APPLES.

| | |
|---|---|
| Best and greatest display of varieties not to exceed 50, A. G. Tuttle, Baraboo. | $10 00 |
| Second best, Gould's Nursery Company, Beaver Dam | 7 50 |
| Third best, Geo. J. Kellogg, Janesville | 5 00 |
| Best 10 varieties adapted to the northwest, E. Wilcox | 10 00 |
| Second best, A. G. Tuttle, Baraboo | 7 50 |
| Third best, Geo. J. Kellogg, Janesville, | 5 00 |
| Best 5 varieties adapted to the northwest, Geo. J. Kellogg, Janesville | 5 00 |
| Second best, Geo. P. Peffer, Pewaukee | 3 00 |
| Third best, Wm. Finlayson, Mazomanie | 2 00 |
| Best and largest winter, not to exceed 20, Geo. P. Peffer, Pewaukee | 5 00 |
| Second best, Geo. J. Kellogg, Janesville | 3 00 |
| Third best, Gould's Nursery Company, Beaver Dam | 2 00 |
| Best 5 varieties winter, A. G. Tuttle, Baraboo | 5 00 |
| Second best, Geo. J. Kellogg, Janesville | 3 00 |
| Third best, Wm. Finlayson, Mazomanie | 2 00 |
| Best show of ten varieties, without regard to adaptation, Gould's Nursery Company, Beaver Dam | 5 00 |
| Second best, Geo. P. Peffer, Pewaukee | 3 00 |
| Third best, Geo. J. Kellogg, Janesville | 2 00 |
| Best plate of three or more specimens each, plate of Red Astrachan, A. G. Tuttle, Baraboo | 1 00 |
| Duchess of Oldenburg, Gould's Nursery Company, Beaver Dam | 1 00 |
| St. Lawrence, A. G. Tuttle, Baraboo | 1 00 |
| Fameuse, Geo. Woolf, Dansville | 1 00 |
| Utter's, Stickney, Baumbach & Gilbert, Waupun | 1 00 |
| Plumb's Cider, Stickney, Baumbach & Gilbert, Waupun | 1 00 |
| Seek-no-Further, Geo. P. Peffer, Pewaukee | 1 00 |
| Willow-Twig, Geo. P. Peffer, Pewaukee | 1 00 |
| Ben Davis, Gould's Nursery Company, Beaver Dam | 1 00 |
| Tolman Sweet, Wm. Finlayson, Mazomanie | 1 00 |
| Golden Russet, Geo. Woolf, Dansville | 1 00 |
| Largest apple, A. G. Tuttle, Baraboo | 1 00 |
| Heaviest apple, Geo. P. Peffer, Pewaukee | 1 00 |

PEARS.

| | |
|---|---|
| Best and greatest display of varieties, Geo. P. Peffer, Pewaukee | 5 00 |
| Second best, Geo. Woolf, Dansville | 4 00 |
| Third best, Gould's Nursery Company, Beaver Dam | 2 00 |
| Best five varieties, Geo. Woolf, Dansville | 3 00 |
| Second best, Geo. P. Peffer, Pewaukee | 2 00 |
| Best 3 varieties, Wm. Kityerson, Milwaukee | 3 00 |
| Second best, Gould's Nursery Company, Beaver Dam | 2 00 |
| Best Flemish Beauty, A. G. Tuttle, Baraboo | 3 00 |
| Second best, Geo. P. Peffer, Pewaukee | 2 00 |

PLUMS.

| | |
|---|---|
| Best and greatest variety, George Jeffery, Five-Mile House | 5 00 |

F. C. CURTIS,
N. N. PALMER,
H. H. HOWLETT,
*Committee.*

Digitized by Google

## CLASS 29.—*Grapes and crabs by professional cultivators.*

### GRAPES.

| | |
|---|---|
| Best and greatest display of varieties, Gould's Nursery Company, Beaver Dam. | $10 00 |
| Second best, C. H. Greenman, Milton | 7 50 |
| Third best, Geo. J. Kellogg. Janesville | 5 00 |
| Best 10 varieties, Geo. J. Kellogg, Janesville | 7 50 |
| Second best, C. H. Greenman, Milton | 5 00 |
| Third best, Geo. P. Peffer, Pewaukee | 3 00 |
| Best 5 varieties, Geo. J. Kellogg, Janesville | 5 00 |
| Second best, C. H. Greenman, Milton | 3 00 |
| Third best, Geo. P. Peffer, Pewaukee | 2 00 |
| Best 3 varieties, C. H. Greenman, Milton | 3 00 |
| Second best, Geo. J. Kellogg, Janesville | 2 00 |
| Third best, Gould's Nursery Company, Beaver Dam | 1 00 |
| Best 2 varieties, Geo. J. Kellogg, Janesville | 2 00 |
| Second best, C. H. Greenman, Milton | 1 00 |
| Best single variety, Geo. J. Kellogg, Janesville | 3 00 |
| Second best, C. H. Greenman, Milton | 2 00 |
| Best 3 bunches Concord on one cane, Geo. J. Kellogg, Janesville | 2 00 |
| Second best, C. H. Greenman, Milton | 1 00 |
| Best 3 bunches Delaware, on one cane, Geo. J. Kellogg, Janesville | 2 00 |
| Second best, C. H. Greenman, Milton | 1 00 |
| Best single variety, quality to rule, Geo. J. Kellogg, Janesville | 3 00 |
| Second best, C. H. Greenman, Milton | 2 00 |

### CRABS.

| | |
|---|---|
| Best and greatest variety named, Wm. Finlayson, Mazomanie | 3 00 |
| Second best, E. Wilcox | 2 00 |
| Third best, A. G. Tuttle, Baraboo | 1 00 |
| Best plate Hyslop, Geo. J. Kellogg, Janesville | 1 00 |
| Best plate Transcendent, A. G. Tuttle, Baraboo | 1 00 |
| Best seedling crabs, Geo. P. Peffer, Pewaukee | 2 00 |
| Second best Gould's Nursery Company Beaver Dam | 1 00 |

J. M. SMITH,
J. W. ARNDT,
H. H. GREENMAN,
*Committee.*

### SWEEPSTAKES ON FRUITS OF ALL KINDS.

| | |
|---|---|
| Best collection of fruits of all kinds, Gould's Nursery Company, Beaver Dam | $7 50 |
| Second best, Geo. J. Kellogg, Janesville | 5 00 |
| Third best, Geo. P. Peffer, Pewaukee | 3 00 |

B. F. FELCH,
H. W. ROBY,
C. H. GREENMAN,
*Committee.*

## CLASS 30.—*Fruits by non-professional cultivators.*

### APPLES.

| | |
|---|---|
| Best and greatest display of varieties not to exceed 50, B. B. Olds, Clinton. | $10 00 |
| Second best, James Osame, Somers | 7 50 |
| Third best, Geo. W. Ringrose, Wauwatosa | 5 00 |
| Best 10 varieties adapted to the northwest, Geo. Jeffery, Five-Mile House | 10 00 |
| Second best, A. A. Boyce, Lodi | 7 50 |
| Third best, M. Robinson, Wauwatosa | 5 00 |

Digitized by Google

| | |
|---|---|
| Best show of 10 varieties, without regard to adaptation, Wm. Reid, North Prairie | $5 00 |
| Second best, C. H. Jacobs, Wauwatosa | 3 00 |
| Third best, Geo. Jeffery, Five-Mile House | 2 00 |
| Best 5 varieties adapted to the northwest, A. Wheeler, Pewaukee | 5 00 |
| Second best, F. C. Curtis, Rocky Run | 3 00 |
| Third best, B. B. Olds, Clinton | 2 00 |
| Best and largest winter, not to exceed 20, Geo. Jeffery, Five-Mile House | 5 00 |
| Second best, James Osame, Somers | 3 00 |
| Third best, B. B. Olds, Clinton | 2 00 |
| Best 5 varieties winter, B. B. Olds, Clinton | 5 00 |
| Second best, Geo, Jeffery, Five Mile-House | 3 00 |
| Third best, F. C. Curtis, Rocky Run | 2 00 |
| Best plate of Red Astrachan, Luther Rawson, Oak Creek | 1 00 |
| Duchess of Oldenburg, Geo. Jeffery, Five-Mile House | 1 00 |
| Fameuse, C. H. Jacobs, Wauwatosa | 1 00 |
| St. Lawrence, B. B. Olds, Clinton | 1 00 |
| Utter's, F. C. Curtis, Rocky Run | 1 00 |
| Plumb's Cider, A. A. Boyce, Lodi | 1 00 |
| Seek-no-Further, F. C. Curtis, Rocky Run | 1 00 |
| Tolman Sweet, Wm. Reid, North Prairie | 1 00 |
| Golden Russet, Wm. Reid, North Prairie | 1 00 |
| Willow-Twig, F. C. Curtis, Rocky Run | 1 00 |
| Ben Davis, Wm. Reid, North Prairie | 1 00 |
| Largest Apple, Geo. Jeffery, Five-Mile House | 1 00 |
| Heaviest Apple, Geo. Jeffery, Five-Mile House | 1 00 |

PEARS.

| | |
|---|---|
| Best and largest display of varieties, James Osame, Somers | 5 00 |
| Second best, Geo. Jeffery, Five-Mile house | 4 00 |
| Best 5 varieties, James Osame, Somers | 3 00 |
| Best 3 varieties, James Osame, Somers | 3 00 |

PLUMS.

| | |
|---|---|
| Best and greatest variety, Geo. Jeffery, Five-Mile House | 5 00 |

In the exhibition of fruits by amateurs we find a very large and fine display of apples, much better than anticipated on account of the late season. Exhibitors are entitled to much credit for their efforts in this department. J. M. Smith, Esq., of Green Bay, exhibited six varieties of excellent pears grown by him.

G. PERRY,
A. G. TUTTLE,
J. N. SAVAGE,
WM. FINLAYSON,
*Committee.*

## CLASS 31.—*Grapes and crabs by non-professional cultivators.*

GRAPES.

| | |
|---|---|
| Best and greatest display of varieties, Wm. Reid, North Prairie | $10 00 |
| Second best, N. N. Palmer, Brodhead | 7 50 |
| Best ten varieties, Wm. Reid, North Prairie | 7 50 |
| Second best N. N. Palmer, Brodhead | 5 00 |
| Best five varieties, Wm. Reid, North Prairie | 5 00 |
| Second best, N. N. Palmer, Brodhead | 3 00 |
| Best three varieties, Wm. Reid, North Prairie | 3 00 |
| Second best, N. N. Palmer, Brodhead | 2 00 |
| Best two varieties, Wm. Reid, North Prairie | 2 00 |
| Second best, N. N. Palmer, Brodhead | 1 00 |

Digitized by Google

Best single variety, Wm. Reid, North Prairie..... $3 00
Second best, N. N. Palmer, Brodhead ..... 2 00
Best three bunches Concord on one cane, Wm. Reid, North Prairie..... 2 00
Second best, G. W. Ringrose, Wauwatosa..... 1 00
Best three branches Delaware on one cane, Wm. Reid North Prairie ..... 2 00
Second best, G. W. Ringrose, Wauwatosa..... 1 00
Best single variety, quality to rule, Wm. Reid, North Prairie..... 3 00
Second best, N. N. Palmer, Brodhead ..... 2 00
Best show Foreign, Mrs. Alex. Mitchell, Milwaukee..... 3 00

CRABS.

Best and greatest varieties named, Wm. Reid, North Prairie..... 3 00
Second best, Geo. Jeffery, Five-Mile House..... 2 00
Third best, N. N. Palmer, Brodhead..... 1 00
Best plate Hyslop, Geo. W. Ringrose, Wauwatosa..... 1 00
Best plate Transcendent, Geo. W. Ringrose, Wauwatosa..... 1 00
Best seedling crabs, Wm. Reid, North Prairie..... 2 00

C. M. HAMBURGH,
H. H. HOWLETT,
W. D. HAMBRIGHT,
*Committee.*

SWEEPSTAKES ON FRUITS OF ALL KINDS.

Best collection fruit, of all kinds, Wm. Reid, North Prairie..... $7 50
Second best, Geo. Jeffery, Five-Mile House ..... 5 00
Third best, James Osame, Somers..... 3 00

H. H. GREENMAN,
DOUGLAS SYKES,
W. D. HAMBRIGHT,
*Committee.*

## CLASS 33.—*Nursery-trees.*

Best collection of deciduous, nursery-grown trees, quality to rule, Gould's Nursery Company, Beaver Dam ..... Diploma.
Best collection of fruit-trees, Gould's Nursery Company, Beaver Dam.... Diploma.
Best collection of hardy flowering shrubs, Gould's Nursery Company, Beaver Dam..... Diploma.

A small lot of very nice apple-trees, three years old, were exhibited by J. N. Savage, of Baraboo; also specimens of apple-trees double-worked upon crab roots, by E. Wilcox, of Trempealeau.

We would respectfully suggest that the "nursery stock" in this class be made of more importance by giving larger premiums.

One of the first and most important points in fruit-growing, is to obtain good trees, rightly named, judiciously pruned, with ample roots, etc. The exhibition by the Gould Nursery Company was an extra fine show of fruit, ornamental trees, and shrubbery, showing care in growing and skill in handling.

A. G. TUTTLE,
WM. FINLAYSON,
J. A. PEFFER,
*Committee.*

## CLASS 34—*Flowers by professional cultivators.*

Best and most artistically arranged floral design, Wm. Kityeron, Milwaukee. $7 50
Best and most tastefully arranged collection of cut flowers, Wm. Kityeron, Milwaukee..... 4 00
Second best, Kate Peffer, Pewaukee..... 3 00
Third best, H. G. Roberts, Janesville..... 2 00

Digitized by Google

| | |
|---|---|
| Best and most tastefully arranged basket of flowers, Wm. Kityeron, Milwaukee | $3 00 |
| Best pyramidal bouquet, Wm. Kityeron, Milwaukee | 3 00 |
| Second best, Kate Peffer, Pewaukee | 2 00 |
| Best pair round bouquets, Wm. Kityeron, Milwaukee | 3 00 |
| Best pair flat bouquets, Wm. Kityeron, Milwaukee | 2 00 |
| Second best, Kate Peffer, Pewaukee | 1 00 |
| Best bouquet everlasting flowers, Wm. Kityeron, Milwaukee | 3 00 |
| Best display dahlias, not more than 20 varieties, Wm. Kityeron, Milwaukee. | 3 00 |
| Second best, Kate Peffer, Pewaukee | 2 00 |
| Best 10 named dahlias, Kate Peffer, Pewaukee | 2 00 |
| Second best, Wm. Finlayson, Mazomanie | 1 00 |
| Best display roses, Wm. Kityeron, Milwaukee | 4 00 |
| Best 5 named varieties roses, Wm. Kityeron, Milwaukee | 3 00 |
| Best display verbenas, Wm. Kityeron, Milwaukee | 3 00 |
| Second best, Kate Peffer, Pewaukee | 2 00 |
| Best 10 varieties of verbenas, Kate Peffer, Pewaukee | 2 00 |
| Second best, Wm. Kityeron. Milwaukee | 1 00 |
| Best show seedling verbenas, Kate Peffer, Pewaukee | 2 00 |
| Second best, Wm. Kityeron, Milwaukee | 1 00 |
| Best show asters, in quality and variety, Kate Peffer, Pewaukee | 2 00 |
| Second best, Wm. Kityeron, Milwaukee | 1 00 |
| Best show perennial phlox, Kate Peffer, Pewaukee | 1 00 |
| Second best Wm. Kityeron, Milwaukee | 50 |
| Best show pansies, Kate Peffer, Pewaukee | 1 00 |
| Second best, Wm. Kityeron, Milwaukee | 50 |
| Best show petunias, Kate Peffer, Pewaukee | 1 00 |
| Second best, Wm. Kityeron, Milwaukee | 50 |
| Best show dianthuses (pink), Kate Peffer, Pewaukee | 1 00 |
| Best show gladiolas, Wm. Kityeron, Milwaukee | 1 00 |
| Second best, H. G. Roberts, Janesville | 50 |
| Best show phlox drummondii, Wm. Kityeron, Milwaukee | 1 00 |
| Second best, Kate Peffer, Pewaukee | 50 |
| Best show stocks, Kate Peffer, Pewaukee | 1 00 |
| Second best, Wm. Kityeron, Milwankee | 50 |
| Best show balsams, Wm. Kityeron, Milwaukee | 1 00 |
| Best show green-house plants, not more than 100 varieties, Wm. Kityeron, Milwaukee | 7 50 |
| Best 20 varieties green-house plants in bloom, Wm. Kityeron, Milwaukee | 5 00 |
| Best 10 geraniums, Wm. Kityeron, Milwaukee | 3 00 |
| Best 6 fuchsias, Wm. Kityeron, Milwaukee | 2 00 |
| Best 6 carnations, Wm. Kityeron, Milwaukee | 2 00 |
| Best display of flowers, of all kinds, raised by exhibitor, Wm. Kityeron, Milwaukee | 7 50 |
| Second best, Kate Peffer, Pewaukee | 5 00 |
| Best display of ornamental-foliage plants, not more than 15 varieties, Wm. Kityeron, Milwaukee | 3 00 |

MRS. A. A. BOYCE,
MRS. D. H. JOHNSON,
MRS. T. J. GILMAN,
*Committee.*

## CLASS 35.—*Flowers by non-professional cultivators.*

| | |
|---|---|
| Best and most artistically arranged floral design, Mrs. E. R. Copeland, Monroe | $7 50 |
| Best and most tastefully arranged collection of cut flowers, Emily T. Smith, Green Bay | 4 00 |
| Second best, Mrs. H. Karzke, Milwaukee | 3 00 |
| Third best, Mrs. E. R. Copeland, Monroe | 2 00 |
| Best and most tastefully arranged basket of flowers, Mrs. H. Karzke, Milwaukee | 3 00 |
| Second best, Emily T. Smith, Green Bay | 2 00 |



Digitized by Google

| | |
|---|---|
| Best pyramidal bouquet, Mrs. H. Karzke, Milwaukee | $3 00 |
| Best pair round bouquets, Mrs. H. Karzke, Milwaukee | 3 00 |
| Best pair flat bouquets, Mrs. H. Karzke, Milwaukee | 2 00 |
| Best bouquet of everlasting flowers, Mrs. H. Karzke, Milwaukee | 3 00 |
| Second best, Emily T. Smith, Green Bay | 2 00 |
| Best display dahlias, not more than twenty varieties, Mrs. A. A. Boyce, Lodi | 3 00 |
| Second best, Mrs. H. Karzke, Milwaukee | 2 00 |
| Best ten named dahlias, Mrs. H. Karzke, Milwaukee | 2 00 |
| Second best, Mrs. A. A. Boyce, Lodi | 1 00 |
| Best display roses, Mrs. H. Karzke, Milwaukee | 4 00 |
| Best five named varieties roses, Mrs. H. Karzke, Milwaukee | 3 00 |
| Best display verbenas, Mrs. H. Karzke, Milwaukee | 3 00 |
| Second best, Mrs. E. R. Copeland, Monroe | 2 00 |
| Best ten named verbenas, Mrs. H. Karzke, Milwaukee | 2 00 |
| Best show seedling verbenas, Mrs. H. Karzke, Milwaukee | 2 00 |
| Second best, Mrs. C. C. Kingsley | 1 00 |
| Best show asters, in quality and variety, Mrs. H. Karzke, Milwaukee | 2 00 |
| Second best, Emily T. Smith, Green Bay | 1 00 |
| Best show perennial phlox, Mrs. H. Karzke, Milwaukee | 1 00 |
| Best show pansies, Mrs. H. Karzke, Milwaukee | 1 00 |
| Second best, C. C. Kingsley | 50 |
| Best show of petunias, Mrs. H. Karzke, Milwaukee | 1 00 |
| Second best, Mrs. E. R. Copeland, Monroe | 50 |
| Best show dianthuses (pink), Mrs. Karzke, Milwaukee | 1 00 |
| Second best, Emily T. Smith, Green Bay | 50 |
| Best show gladiolas, Emily T. Smith, Green Bay | 1 00 |
| Best show phlox drummondii, Mrs. H. Karzke, Milwaukee | 1 00 |
| Second best, C. C. Kingsley | 50 |
| Best show stocks, Mrs. H. Karzke, Milwaukee | 1 00 |
| Second best, Emily T. Smith, Green Bay | 50 |
| Best show balsams, Mrs. H. Karzke, Milwaukee | 1 00 |
| Best show green-house plants, Mrs. H. Karzke, Milwaukee | 7 50 |
| Best 20 varieties green-house plants in bloom, Mrs. H. Karzke, Milwaukee | 5 00 |
| Second best, Mrs. C. C. Kingsley, Milwaukee | 4 00 |
| Best 10 geraniums, Mrs. H. Karzke, Milwaukee | 3 00 |
| Second best, Mrs. C. C. Kingsley, Milwaukee | 2 00 |
| Best 6 fuchsias, Mrs. H. Karzke, Milwaukee | 2 00 |
| Second best, Mrs. C. C. Kingsley, Milwaukee | 1 00 |
| Best 6 carnations, Mrs. H. Karzke, Milwaukee | 2 00 |
| Best display of flowers raised by exhibitor, Mrs. H. Karzke, Milwaukee | 7 50 |
| Second best, Emily T. Smith, Green Bay | 5 00 |
| Best show ornamental foliage plants, Mrs. S. S. Merrill, Milwaukee | 3 00 |
| Second best, Mrs. H. Karzke, Milwaukee | 2 00 |

VICK'S SPECIAL PREMIUM.

| | |
|---|---|
| Best collection cut-flowers from seeds grown or imported by him, Mrs. H. Karzke, Milwaukee | 20 00 |
| Second best, Emily T. Smith, Green Bay | 10 00 |
| Third best, Mrs. E. R. Copeland, Monroe | 5 00 |
| Fourth best, Gertie Kellogg, Janesville | Floral Chromo. |

BUD. A. KOSS,
KATE PEFFER,
H. G. ROBERTS,
*Committee.*

CLASS 36.—*Flowers by professional non-commercial cultivators.*

| | |
|---|---|
| Floral design, Mrs. Alex. Mitchell, Milwaukee | $7 50 |
| Cut-flowers, Mrs. Alex. Mitchell, Milwaukee | 5 00 |
| Best show green-house plants, Mrs. Alex. Mitchell, Milwaukee | 7 50 |
| Twenty varieties green-house plants, Mrs. Alex. Mitchell, Milwaukee | 7 50 |
| Best 10 geraniums, Mrs. Alex. Mitchell, Milwaukee | 5 00 |

BUD. A. KOSS,
KATE PEFFER,
H. G. ROBERTS,
*Committee.*

Digitized by Google

CLASSES 38 AND 39.—*Heavy machinery, and machinery for agricultural and domestic purposes.*

Wallon & Little, Freeport, Ill., Washing-Machine, for superior merit... Diploma.
August Mayor, Port Washington, Wis., churn, for superior merit in cooling milk, etc ..... Diploma.
Victor Scale Co., Moline, Ill., Victor Scales, for accuracy and durability. Diploma.
P. R. Dedrick & Co., Albany, N. Y., Perpetual Hay-Press, for superior advantages ..... Diploma.
J. D. Easter & Co., Chicago, Ill., Marsh Harvester, for general advancement in utility, lightness, etc..... Diploma.
A. T. Zelisch, Mayville, Wis., Ne Plus Ultra Straw Cutter, for hand or power, for best device in cutting and feeding..... Diploma.
Burt Manufacturing Co., Detroit, Mich., Eureka Pumps, for novel utility. Diploma.
R. Woolsay, Arkansas City, Kan., Rotary Washing-Machine, for general advantages ..... Diploma.
Victor Scale Co., Moline, Ill., Bag-Scale, for convenience and utility.... Diploma.
C. F. Dwight, Hastings, Mich., corn and fallow cultivator combined, for special advantages..... Diploma.
Adams & French, Cedar Falls, Iowa, harvester, for special device of positive rake and elevator combined ..... Diploma.
Faust & Bradley Manufacturing Company, Chicago, Ill., sulky-plow, for special device for lifting..... Diploma.
Faust & Bradley, Manufacturing Company, Chicago, Ill., Freedman Harrow, for special coupling and lifting device..... Diploma.
Faust & Bradley Manufacturing Compay, Chicago, Ill., Nebraska Breaking-Plow, for strength, lightness, and durability..... Diploma.
P. P. Mast & Co., Springfield, O., cultivator and seeder combined, for improvements ..... Diploma.
Little & Son, Sheboygan Falls, Wis., Little's Diamond Mower, for novel and superior cam device without gearing..... Diploma.
Clegg, Wood & Co., Dayton, Ohio, horse-rake, for general advantages.... Diploma.
Harris & Co., Janesville, seeder, for improved advantages..... Diploma.
Harris & Co., Janesville, seeder, superior special advantages in pulverizing the soil..... Diploma.
J. G. Trentlage & Co., Milwaukee, sulkey corn cultivator, for adjustability of different parts..... Diploma.
D. M. Osborn & Co., (Lindsay & Co.,) Milwaukee, for best display agricultural machinery..... Diploma.
M. C. Goucher, Springfield, O., horse-rake, for improved cleaner..... Diploma.
L. J. Bush, Milwaukee, thresher, for general superior quality..... Diploma.
Huskin & Maltby, Beloit, automatic gate, for best device..... Diploma.
A. A. Abbott & Co., Chicago, corn-planter, for general good qualities... Diploma.
M. P. Jerdee, Madison, Beloit Harvester, for advanced improvements.... Diploma.
John Werner, Prairie du Sac, Werner's Harvester, for best adjustable reel..... Diploma.
W. F. Whitney, Milwaukee, clover-huller, for improvements..... Diploma.
A. J. Hayt, Milwaukee, St. Paul Harvester, for valuable elevator-device. Diploma.
Van Brunt & Davis, Horicon, seeder and cultivator, for combination of ease in operating, durability, and general good points of utility,..... Diploma.
Dere & Co., Gilpin Sulky-Plow, for advanced improvements..... Diploma.
Wheel and Seeder Company, Fond du Lac, Wis., Fond du Lac Seeder, for valuable special adjustable gear..... Diploma.
Metcalf Fond du Lac Seeder, for special device of yielding tooth..... Diploma.
Althouse, Wheeler & Co., Waupun, Waupun Wind-Mill, superior advantages..... Diploma.
Winship Bros., Racine, 1 wood-pump..... Diploma.
P. O. Johnston, Milwaukee, water-cooler..... Diploma.
Specimen roofing..... Diploma.
Wilcox & Co., Elgin, Ill., bench clothes-wringer..... Diploma.
E. J. Hohnes, Fifield, 1 bee-hive ..... Diploma.
Arnold, Yale & Co., Milwaukee, 1 wood-saw, frame-saw ..... Diploma.
1 emery-wheel machine..... Diploma.

Digitized by Google

J. F. Wilcox, Fort Atkinson, Branson knitter. ..... Diploma.
Maurice Campbell, Milwaukee, 1 steam boiler..... Diploma.
O. L. Packard, Milwaukee, comb, band, and scroll-saw..... Diploma.
Hand and power bolt-cutter..... Diploma.
Pow's band-saw..... Diploma.
Sturtevant pressure..... Diploma.
Narracong Bros., stone-dressing machine..... Diploma.
Universal Boiler Fluid Company, Milwaukee, mastic rubber-cement .... Diploma.
J. M. Corbett & Co., patent governor on an engine in operation..... Diploma.
Filer, Stowell & Co., 1 engine..... Diploma.
1 patent pulley..... Diploma.
patent coupling..... Diploma.
mill-dog standard..... Diploma.
mill-dog attachment and head-block..... Diploma.
H. G. Cole, Milwaukee, boiler feeder regulator..... Diploma.
Walton & Little, Freeport, Illinois, washing-machine..... Diploma.
Schneble & Wright, Dayton, Ohio, metalic piston-rod packing-box..... Diploma.

CLASS 40.—*Machinery, tools, etc., for manufacturing purposes.*

Edward Nash & Co., Milwaukee, 4 bellows ..... Diploma.
S. J. Goodwin, Beloit, exhibition paint-mills..... Diploma.
E. P. Allis & Co., Milwaukee, 1 steam-engine..... Diploma.
Notbohm Bros., Milwaukee, middling purifier..... Diploma.
Peter Wisel, Milwaukee, steam-engine and pump..... Diploma.
Arnold, Yale & Co., Milwaukee, 35 horse-power portable engine..... Diploma.
1 10-horse power portable-engine, on wheels..... Diploma.
1 4-horse power portable-engine, upright..... Diploma.
1 2-horse power portable-engine, upright..... Diploma.
1 miter-machine..... Diploma.
1 planer and matcher ..... Diploma.
1 blower..... Diploma.
1 iron-shaper..... Diploma.
1 4-side moulder..... Diploma.
1 pony planer..... Diploma.
upright drilling-machine.. ..... Diploma.
display of wood and iron machinery in operation..... $50 00
Rundle & Spence, steam trap..... Diploma.
H. Campbell, horizontal steam-boiler..... Diploma.
T. Crapo, mill-picks..... Diploma.
James Sherriffs, propeller-wheels..... Diploma.
D. J. Power, steam hammer..... Diploma.
Ingraham & Beard, smut-mill..... Diploma.

---

## DEPARTMENT I.

CLASS 41.—*Stone-cutters' work, brick, and other building-material.*

Drain-tiles, best specimen, H. Berthelet..... $3 00
Best roofing-material, other than shingles, P. O. Johnston & Co., Milwaukee. 5 00

HOUSE-BUILDING MATERIAL.

Show-doors, sash, blinds, etc., H. J. Millman, Milwaukee..... Diploma.

J. A. ROPER,
O. E. SHERWOOD,
*Committee.*

Digitized by Google

### CLASS 42.—*Metallurgic products.*

Best show pig-iron, R. P. Elmore & Co., Milwaukee..... Diploma.
Best show castings, E. A. Harris, Milwaukee..... Diploma.

J. A. ROPER,
O. E. SHERWOOD,
*Committee.*

### CLASS 43.—*Stoves, furnaces, hollow-ware, and articles of hardware.*

Best cooking-stove for wood, Wm. Frankfurth & Co., Milwaukee..... $3 00
Best cooking-range for families, in operation, A. W. Coe, Milwaukee..... 3 00
Best ornamental parlor-stove, A. W. Coe, Milwaukee..... 3 00
Best display of stoves, A. W. Coe, Milwaukee..... Grand Silver Medal.
Best sample fire-grates, A. W. Coe, Milwaukee..... 3 00
Best exhibition guns, E. Remington & Sons..... Diploma.
Best refrigerators, P. O. Johnston & Co., Milwaukee..... 3 00
Best ornamental iron-work, Freeman & Smith, Racine..... 5 00

J. A. ROPER,
O. E. SHERWOOD,
*Committee.*

### CLASS 44.—*Silver and Britannia-ware.*

Best and largest display Britannia-ware, Racine Silver-Plate Company... Diploma.
Best and largest display silver and gold electro-plating, Racine Silver-Plate Company..... Diploma.

J. A. ROPER,
O. E. SHERWOOD,
*Committee.*

### CLASS 46.—*Surgical, dental, mathematical, and philosophical instruments and apparatus.*

Best display dental instruments and apparatus, Smith & Dartt, Milwaukee, Diploma.
Best display dentistry, Smith & Dartt, Milwaukee ..... Diploma.
Skill in dental work, Smith & Dartt, Milwaukee ..... Diploma.
Display practical dentistry, Smith & Dartt, Milwaukee ..... Diploma.

E. B. WOLCOTT,
T. H. WEHRAN,
*Committee.*

### CLASS 46.—*Chemical manufactures.*

Best srmple yeast-cakes, National Yeast Company, Seneca Falls, N. Y ..... $2 00
Best sample bar.soap, James Nyle, Goshen Ind. .....$2, Diploma recommended.
Best sample fancy soap, Peck & Tenney's, Milwaukee..... 2 00
Show perfumery, Alfred Wright, Rochester, N. Y ..... Diploma.

E. B. WOLCOTT,
T. H. WEHRAN,
*Committee.*

### CLASS 47.—*Carriages, wagon-work, etc.*

Best double carriage, Wm. Servis, Sheboygan Falls..... ..Grand Silver Medal.
Best single top-buggy, Wm. Servis, Sheboygan Falls ..... Silver Medal.
Best single open buggy, Denny Galeher, Milwaukee..... Diploma.
Trotting-wagon, T. W. Rice, Milwaukee..... Diploma.
Double sleigh, Wm. Servis, Sheboygan Falls..... Diploma.
Single sleigh, N. Purdy, Milwaukee..... Diploma.
Lumber-wagon, Monroe Manufacturing Company ..... Diploma.
Exhibition-carriages, wagons, etc., Wm. Servis, Sheboygan Falls.....Grand Silver Medal.

JAMES W. BAKER,
D. C. VAN BRUNT,
*Committee.*

Digitized by Google

## CLASS 48.—*Cabinet-ware, house-building material, etc.*

| | |
|---|---|
| Parlor-set, Mathews Bros. & Co., Milwaukee | Silver Medal. |
| Extension-table, Mathews Bros. & Co., Milwaukee | $5 00 |
| Center-table, Mathews Bros. & Co., Milwaukee | 5 00 |
| Book-case, Mathews Bros. & Co., Milwaukee | 5 00 |
| Ladies' work-stand, Mathews Bros. & Co., Milwaukee | 5 00 |
| Writing-table or desk, Mathews Bros. & Co., Milwaukee | 5 00 |
| Spring-bed bottom, Mathews Bros. & Co., Milwaukee | 2 00 |
| Six dining-chairs, Mathews Bros. & Co., Milwaukee | 5 00 |

COOPERAGE, ETC.

| | |
|---|---|
| Barrels for liquors and meats, Peter Knudsen, Weyauwega | Diploma. |
| Display of cooperage and wooden-ware, Geo. H. Page, Milwaukee | Diploma. |

JAMES W. BAKER,
D. C. VAN BRUNT,
*Committee.*

## CLASS 49.—*Leather and leather manufactures.*

| | |
|---|---|
| Three trunks, Rornadka Bros., Milwaukee | Diploma. |
| Exhibition sewed boots and shoes, Hanchett & Deland, Milwaukee | Diploma. |

N. W. DEAN,
JOHN E. THOMAS,
*Committee.*

## CLASS 50.—*Paper, printing, book-binding.*

| | |
|---|---|
| Exhibition plain and fancy binding, J. B. Hager & Sons, Milwaukee | Diploma. |

N. W. DEAN,
JOHN E. THOMAS,
*Committee.*

## CLASS 51.—*Textile fabrics, clothing, etc.*

| | |
|---|---|
| Plaid flannel, Mrs. Sarah Bell, Greenfield | Diploma. |
| Suit men's clothing, Graham, Burr & McMahon, Milwaukee | $10 00 |
| Suit boys' clothing, Graham, Burr & McMahon, Milwaukee | 5 00 |
| Exhibition furs and fur goods, Chas. Stein & Co. | Diploma. |

ETTA R. GAY,
MARY E. THOMAS,
*Committee.*

## CLASS 52.—*Domestic manufactures.*

| | |
|---|---|
| Best woolen kersey blankets, Mrs. Sally Bell, Greenfield | $4 00 |
| Ten yards flannel, Mrs. Sally Bell, Greenfield | 4 00 |
| Fifteen yards wool carpet, Miss Isabel Long, Greenfield | 4 00 |
| Best rug of any material, Katherine Hassig, Milwaukee | 4 00 |
| Best 15 yards rag-carpet, Mrs. Sally Bell, Greenfield | 4 00 |
| Best pair cotton stockings, David Bore, Hubbleton | 2 00 |
| Best white quilt, Jacob Degraff, Brookfield | 3 00 |
| Best worsted scarf, Mrs. T. W. Williams, Milwaukee | 4 00 |
| Best knit counterpane, Mrs. C. A. Fulsom, Milwaukee | 3 00 |
| Best wrought counterpane, Miss Sophia Jacobson, Milwaukee | 3 00 |
| Best pair wool socks, by girl under 15, Lucy Mitchel, Genesee | 2 00 |
| Best display of entire class, Mrs. Sally Bell, Greenfield | 5 00 |

ETTA R. GAY,
MARY E. THOMAS,
*Committee.*

Digitized by Google

### CLASS 53.—*Millinery and dress-making.*

Best lady's cloak, Mrs. T. W. Williams, Milwaukee..... $3 00
Best lady's dress, Mrs. T. W. Williams, Milwaukee..... 3 00
Best variety articles ladies' under-clothing, Susie Grinthan, Mil..... Silver Medal.

ETTA R GAY,
MARY E. THOMAS,
*Committee.*

---

## DEPARTMENT J.—FINE-ARTS.

### CLASS 55.—*Works of art.*

Best portrait in oil, from nature, James R. Stuart, Madison.. Diploma and $10 00
Second best, Mrs. J. T. Cavanaugh, Milwaukee..... 10 00
Best original landscape in oil, from nature, J. B. Hager & Sons, Milwaukee Diploma and 10 00
Second best, Allen Porter, Dodge's Corners..... 10 00
Historical landscape, in oil, from history, Theo. Heis, Milwaukee, Diploma and 10 00
Best animal painting, in oil, from nature, James R. Stuart, Madison..... Diploma.
Best flower painting, in water-colors, Mrs. J. T. Cavanaugh, Milwaukee.. Diploma.
Best portrait, in crayon, from nature, Mrs. A. R. Boos, Milwaukee..... Diploma.
Best portrait, in crayon, from photograph, W. H. Sherman, Milwaukee.. Diploma.
Best india-ink photograph, Mrs. J. T. Cavanaugh, Milwaukee..... $10 00
Best water-color (stipple) photograph, Mrs. J. T. Cavanaugh, Milwaukee.... 10 00
Best wood-engraving, John Mar, Milwaukee..... Diploma.
Best pencil-drawing, from nature, Theo. Heis, Milwaukee..... Diploma.
Best photographs and sun-pictures, W. H. Sherman, Milwaukee..... Diploma.
Second best, E. H. Canfield, Milwaukee..... $5 00
Best landscape photograph, W. H. Sherman, Milwaukee..... Diploma.
Best gilding on glass by exhibitor, W. V. George, Milwaukee ..... Diploma.
Best collection stereoscopic views, Wisconsin natural scenery, W. H. Sherman, Milwaukee ..... Diploma and $10 00
Best exhibition by apprentice in any of the above branches, Theo. Heis, Milwaukee, (Edward Steele) ..... Diploma.
Best exhibition oleographs, American Oleograph Company, Milwaukee.. Diploma.
Best collection of oil paintings, John S. Conway, Milwaukee..... $50 00

F. S. PERKINS,
JOHN E. THOMAS,
LYDIA E. HEWITT,
*Committee.*

### CLASS 56.—*Plain sewing.*

Best samples plain sewing, Jennie Newnham, Oconomowoc..... $4 00
Best crochet and fancy knitting-work, Sindey Squire, Wauwatosa..... 4 00
Second best, Mrs. C. H. Root, Ripon..... 2 00
Best tidy, Sidney Squire, Wauwatosa ..... 3 00
Second best, T. H. Irvin, Mukwanago..... 2 00
Best landscape embroidery, Mary J. Hennessey..... 4 00
Best worsted embroidery, Miss Sarah Mitchell, Milwaukee ..... 4 00
Best embroidered handkerchief, Miss C. Simon, Milwaukee..... 3 00
Best embroidered chemise, Miss Sarah Mitchell, Milwaukee..... 3 00
Best raised worsted embroidery, Augastle Schulz, Milwaukee ..... 3 00
Best basket from old hoop-skirts, Sidney Squire, Wauwatosa ..... 3 00
Best needle-work, or floss embroidery, Mrs. S. Weatherby, Milwaukee..... 4 00
Second best, Mrs. S. Weatherby, Milwaukee..... 2 00

Digitized by Google

| | |
|---|---|
| Best silk embroidery, Mary J. Hennessey, Muskego Center | $4 00 |
| Second best, W. P. Lynde, Milwaukee | 2 00 |
| Best sample work in wax, A. E. Foot, Milwaukee | 2 00 |
| Second best, A. A. Hoskin, Milwaukee | 1 00 |
| Best work in feathers, Mrs. T. W. Williams, Milwaukee | 2 00 |
| Best sample shell-work, H. G. Roberts, Janesville | 2 00 |
| Second best, Sidney Squire, Wauwatosa | 1 00 |
| Best sample bead-work, Mrs. M. Weston, Milwaukee | 2 00 |
| Second best, Mrs. C. H. Root, Ripon | 1 00 |
| Best piece fancy netting, Grace Delpsch, Wauwatosa | 1 00 |
| Best exhibition hair-work | Grand Silver Medal. |

MARY E. THOMAS,
ANNA M. SMITH,
LIZZIE M. SMITH,
*Committee.*

Digitized by Google

# STATE AGRICULTURAL CONVENTION.

Held at Madison, February 8 to 11, 1876.

*TUESDAY, 7:30 P. M.*

Convention met in Assembly Chamber, and was called to order by President Stilson, who made the following brief remarks:

LADIES AND GENTLEMEN:—I have the pleasure of introducing to you this evening Mr. Myers, of Chicago, who will address you upon the momentous question of our finances. I am well aware that there are those who say that the farmers should not meddle with this great question, but they ignore the fact that they have to deal with it every day of their life, as much as they have with production, and it is the business of all industrial classes to see that this question is fairly and candidly discussed upon both sides, that the people of all classes may form correct conclusions, and act wisely and well.

## FINANCE.

BY SIDNEY MYERS, CHICAGO.

I can coincide with the views expressed by the president of the Agricultural Society, that the subject of finance, and not that alone, but all of these great subjects which interest the people, involving their welfare, should be considered and discussed by the farmers; by the farmers, I say, especially, for reasons which I shall endeavor to give. Metropolitan city life, at least, and in fact all

Digitized by Google

city life, is so absorbing that men have only time for action, but little time for thought. Those who are the most distinguished in the various professions, who are distinguished in commerce and trade, residents of our great cities, will be found to have spent much of their time in their earlier years in the country or in smaller towns. It has been said, and I think justly, that you cannot judge of what a man knows by the size of his library. There are various kinds of men, but there are, at least, two classes, one like one of our great elevators, that takes in grain and stores it in bins, and delivers this same grain, without change, into the cars and into the canal-boats. There is another class of men that may be represented by the mills that receive the grain, that grind it, that bolt it, that separate the chaff, the hull from the pure life-giving substance, and turn out that which is fit for the subsistence of men, pabulum for the human body. And it is as necessary, Mr. President, that pabulum for the mind should be ground, should be bolted, should be assorted, before it is given to men, as that wheat from the farm should go through the process that it undergoes in the mill; and I say, therefore, that those men who live in the country, and those men whose whole attention is not absorbed in the details of business in which the mind as well as the body is wholly engaged, are better mills to grind truths, and separate them, and to give decisions upon them. Any question, whatever, that is beyond the comprehension of this American people cannot be settled, and if there is any great question which involves the interests of our people, which is so intricate that it cannot be brought within the comprehension of the average man, then it is a sad thing for our country. I come here to-night to consider, with you, the subject of finance.

I am satisfied that there is scarcely any difference of opinion among the people of this country with regard to this subject of finance in its principles, though there may be with regard to the details of perfecting a system which we all desire. There is no intelligent man in this State, or in this nation, who desires a circulating medium which is not valuable, a circulating medium for which, when he passes it away from him, he shall not receive for it an equivalent, a *quid pro quo*. I believe that we are all in favor of an absolutely convertible currency, on a specie basis. I think there is no difference of opinion with regard to that, and for myself, I

Digitized by Google

will say that I am desirous of seeing a circulating medium which is absolutely convertible at all times and in proper places, and that is upon a specie basis. I mean by specie basis that its value may be measurable by that metal called gold, not only here, but in the markets of the world. A great deal of apparent difference, a great deal of contention, a great deal of dangerous and disastrous delay in the production of results, arises from the fact that men are not patient to listen to each other; to get at each other's meaning, to endeavor, as it is the object, I believe, of the science of pleading in the law, to do away with all minor points, and to come to the issue.

The issue is, how, by what means shall we secure for ourselves an absolutely convertible currency on a specie basis? Where shall we look for precedents? What example shall we follow? What mistakes shall we avoid? What is the present status of the financial question in this country? What is the financial status in other civilized countries?

Is there any civilized country upon the face of the earth, which to-day has a satisfactory system of currency? For myself I know of none. Is it in Russia, whence reports of financial and commercial disasters come daily over the wires? Is it in Austria, where the currency is not measurable by gold, not convertible, and where their commercial, as well as their financial affairs are greatly disturbed? Is it in Prussia? The financial affairs of that country are in a very unsettled condition. Is it in England? If so, then why have the boards of trade, throughout Great Britian and Ireland, recently sent their representatives to a general convention for the purpose of petitioning the British government to ascertain why it is that the rate of interest, the price of money, rises and falls, leaving a margin of twice the ordinary rate of interest within sixty days; a system under which they say it is utterly impossible to do legitimate business; a system which such practical statesmen as Gladstone, Lowe, and Groschen are ready to abandon. The manufacturers say we buy our raw material when money is rated at three per cent. and is abundant, when interest is low, prices are high, and if a manufacturer buys raw material when interest is at the low rate of three per cent. per annum, then he must pay high prices, and if he goes on to change that elementary substance, raw material, into commodities, and when it is ready for the maket the price of money has gone up from three per cent. per annum to six or nine,

Digitized by Google

then he must sell his products on a market, where interest being high, prices are low, and what is the result? Unless he has an enormous capital to bridge over these fluctuations and enable him to carry through his products, and not sell them upon a nine per cent. money market, but to hold them until the rate of interest is reduced to three, money plenty, and prices good for his products, then the sheriff comes in, his property is sold under the hammer, and who is it bought by? It is bought by the few great establishments, and the big fish eat up the little ones. This is the condition of the financial and commercial affairs in Great Britian. A system under which, at a recent date, there were forty-three millions of pounds sterling of circulating bank-notes, including the Bank of England, the private banks, and the joint-stock banks of England, the banks of Ireland, and of Scotland. Forty-three millions of pounds sterling of bank-notes in circulation, thirty millions of which is unsecured. You have been told that behind that forty-three millions of pounds sterling of circulating notes in Great Britian, there is pound for pound, dollar for dollar of gold to redeem them, and you will hold responsible those who should know better, who have told you repeatedly this falsehood. Of the forty-three million of bank-notes in circulation in Great Britian and Ireland, there is just thirteen millions of gold and silver coin, available for its redemption. Thirteen millions of coin with which to redeem forty-three millions of paper.

Common sense is a systematic arrangement of facts and correct conclusions derived therefrom. Science is uncommonly good common sense; wider arrangement of facts, and more careful conclusions derived therefrom, and anything that is inconsistent with common sense is not scientific. Now it is unscientific to say that forty-three millions of paper can be redeemed with thirteen millions of gold, and any system which is based on such an assumption, is an unscientific system, and it is not a common-sense system.

Venice was carrying on a war with the Emperor of the East, and with Greece in the twelfth century more than seven hundred years ago. Venice needed ships; needed clothing and munitions of war. It called upon its people, "Bring in your treasure, bring in your coin to the loan-department of this government. The country is in danger; we purpose to save it; we need and we command your contributions;" and the people and the merchants of

Digitized by Google

Venice, brought in their gold, and their silver, and whatever else of value the Republic of Venice needed; and for each amount brought in, each individual was credited upon the ledgers of the nation with the amount so brought in. He received credit in the books of the nation, as you receive credit when you deposit currency with your bank; and Venice did not say when it would repay, but said by law: we will pay four per cent. interest upon this balance; we will pay four per cent. interest upon the debt which the nation has incurred to each of you individually; and what was the result? A owing B, A having a balance to his credit in the loan-department of Venice inscribed in the books of the nation, would say to B, "step down to the loan-department, which was soon called the bank, the first bank of which we have any record; and A would transfer to B, the amount he was owing B, taking it from A's account and placing it to the credit of B; and Venice enacted that the tender of a transfer of such national debt should be a legal tender, and a payment thus made should be a legal payment, and this national debt currency went to a premium of thirty per cent. over gold and for centuries Venice had no suspensions or commercial crises.

There was another country that only fourteen years ago was sorely pressed by active enemies at home, and by threatening from abroad. It was threatened with disruption, and many were the grave doubts entertained of its being able to pass successfully through that great crisis. It needed not money. It needed those things of which money is the servant; of which money is as much the means of transfer as are these iron tracks that center in your city. They wanted horses for their cavalry; blankets for their soldiers; iron for their shot, and their guns; lead for bullets; leather for accoutrements, for harness, and saddle, and they called upon the people for those things; and what did they give for those things? They gave them bonds. They gave them non-interest bearing bonds of small denominations, convenient for circulation, commonly called greenbacks. None of these bonds have been authorized since the close of the war. Of the greenbacks, or small bonds which were issued by the Government of the United States, in evidence of the indebtedness which they had contracted and received by the people for forage and munitions of war, and for services, there are none in circulation to-day that were not issued for those

Digitized by Google

purposes. Every greenback in circulation represents debt incurred by the government, for which that government has received a valuable consideration. The holder of the greenback to-day is the financial successor of the farmer who furnished cavalry horses, or the mechanic who furnished the harness, or those who furnished other munitions used by the nation in the defense of its life. A gentleman told me that he went to the Secretary of the United States Treasury some years ago, and said, "Sir, would'nt the government be willing to take these greenbacks into the treasury during the summer when there is little trade, and commerce, when there is little need for currency, and pay some interest upon them; provided, that when the demands of commerce require them for circulation, that the obligation, bearing interest, which is given in the place of them, would be returned, and these obligation will be taken out and set in circulation again."

"It would only be a part of the time that you would pay interest," said the Secretary of the Treasury, Mr. Boutwell, "I don't know how we could use that money so as to make it pay us three per cent." Now, if we do not pay our debts, and if our creditor comes to us and says, "I don't ask you to pay the principal, but wouldn't you pay me a little interest on that debt part of the time?" what would you think of me, being your debtor, if I should answer, "I don't know where I could use that note of mine where I could make three per cent. out of it." We must come to the conclusion that the gentleman did not know that that greenback was a bond; a bond depreciated, and why depreciated? Because repudiated. On that little one dollar bond, which was issued in payment of wages, the pittance of some soldier, there are eleven and one-half years interest due. Eleven years and a half's interest due upon that note of the government given as an indication that it owed for the services of some soldier. It was not a payment. No man and no nation can pay a debt with its own promise. That is not a payment. It was a promise. It was saying to the soldier who received the greenback, that the government was not able to pay him then, but gave him a little one dollar bond and the law under which that bond was issued provided that if that bond was brought to the treasury of the United States, the Secretary of the Treasury would not say, if he was requested to pay interest upon it, that he did not know where he could use it to make the interest

Digitized by Google

back again, but the law provided that these little bonds, called greenbacks, should be convertible into six per cent. gold interest-bearing bonds of the United States, that are worth $1.20 to-day. There are eleven and a half years' interest due on that greenback. If the Government of the United States discharged with fidelity the obligation, which it assumed when it issued it, it should pay the sixty-nine cents interest which has accrued on that note. Why? Because eleven and a half years ago went into effect, on only sixty days notice, a repeal of the act by which that greenback was convertible into six per cent. bonds. Under what circumstances was that act of repeal? Were there national banks that could issue notes to take the place of the greenback? There were no national banks at that day. The people were commanded to bring in the only circulating medium that they had with which to carry on the trade of the country in order to avail themselves of that privilege of conversion into six per cent. bonds, and then the door was shut, and we now purpose to open that door. We purpose to make that greenback honest by making it convertible, at the pleasure of the holder, into gold interest-bearing obligations of the United States, and that is the size of the rag-baby. [Applause.] That is the inter-convertible "humbug."

In a state of war the government offered to pay interest at six per cent. upon these little bonds, the crisis is past, circumstances are changed. We say now we do not ask the government to pay six per cent. interest on that class of debt. Six per cent. interest is too high for the government to pay under the present circumstances. We say to any holder of these obligations, you may present them at either of the sub-treasuries, and receive in return another form of obligation, not increasing the national debt, but simply when one form of obligation is taken into the sub-treasury, it shall be locked up in a box, and kept there; that another form of paper obligation, representing the same debt shall be issued, bearing interest at about the rate of three per cent. gold, and as at some seasons of the year the public can use more of these non-interest bearing obligations than they can at others, whereas it is a convenience to the public to have issued the obligations of the government, instead of those of any individual or any corporation, to allow them to come to the government and say, "you are paying me three per cent. interest upon the debt, represented by this certifi-

Digitized by Google

cate. Here is the certificate; you are paying interest at three per cent. upon $10,000 now; I will give you back the three per cent. certificate, pay me the interest up to date, and I will take these non-interest bearing obligations, and I will use them in commerce; provided that when I get through making payments, and these small bonds are paid back to me in business, I will not be compelled to hawk them about the streets, but may bring in those non-interest bearing obligations, and secure interest-bearing obligations for them."

In the interchangeability of these little government bonds drawing no interest with the government bonds or certificates bearing interest, there is a subtle principle that will regulate the movements of finance and commerce, as the movements of the steam-engine are regulated by its governor. In mid-summer and in mid-winter these greenbacks will come into the sub-treasuries out of circulation and there will be no redundancy of the currency; no undue excess of prices, or speculative values, but the operation will be like the operations of nature, silent, automatic, self-acting. Here we have an absolutely convertible currency. In the small bond called greenbacks issued by our government, non-interest bearing, but redeemable at the pleasure of the holder into bonds bearing interest, there is absolute convertibility. Now you can make the rate of interest govern the value of the obligation just as accurately as with a Fairbanks scale you can weigh a ton of hay with a couple of ounces of brass. The rule of three has been introduced into finance. During the war there was an issue of eighty million of three per cent. certificates, and persons holding greenbacks were authorized to take greenbacks to the sub-treasury in New York, and receive United States three per cent. obligations for them, and when they took the three per cent. obligations back to the sub-treasury they could have greenbacks. The three per cent. certificate has been tried and I think it has not been found wanting. It was withdrawn, arbitrarily; it was injudiciously withdrawn. It was the withdrawal of the last element of elasticity from our currency, and immediately after its withdrawal occurred the stringency of 1871, after the Chicago fire, when the Secretary of the Treasury found it necessary to loan to the banks in New York city $5,000,000 of greenbacks in order to prevent a financial crisis. And the same thing was done after the Boston fire, and the same thing was done, not in the most

Digitized by Google

scientific way, after the panic of 1873. The government officials could not agree to do it when they held their memorable meeting at the Fifth Avenue Hotel one Sunday afternoon, but they did do it finally. They were forced to do it afterward, and they soon let go the whole reserve into circulation from the necessity of paying the expenses of the government, more especially, than for the relief of the community; to pay the expenses of the government when business was paralyzed and taxes could not be collected.

Says a reliable English writer: "Within the short historical period of forty-one years England has been visited by five great panics, each probably fifty times more destructive to property, and possibly to life, than the greatest earthquake the world has ever known, all of the same character, all exhibiting the same features, and all occasioned by a demand for gold for exportation."

This is the English experience.

In our own country previous to the late war—suspension of specie payment, and financial and commercial crisis—the conversion of industrious and producing working people into homeless, penniless, and idle "tramps," the stoppage of mills, the ruin of great and small mercantile and manufacturing establishments, a stoppage of all industry and trade occurred at intervals of six years. Such were the experiences during the panics of 1811, 1814, 1819, 1825, 1834, 1837, 1839, 1841, 1857, and 1861. Ten financial crises and suspensions of specie redemption of bank-notes and general suspension of business in fifty years, averaging a panic once in five years.

These experiences are common to all countries in which the false English system of currency and finance prevails. Is it not time, then, to abandon the English system?

A "specie-paying" bank, like the Bank of England, is run on the principle that the people are very ignorant, and that the people know that the bank does business by issuing $300,000 of notes, promising to pay them in gold on demand, when it only keeps habitually $100,000 of coin to redeem with. Can they pay $300,000 of obligations on demand, when they only have $100,000 in coin with which to redeem or pay? You will say, no! You are doubtless correct. Common sense dictates your answer, no! and experience confirms its correctness. When a bank of issue discovers that after paying out their $100,000 of coin in the redemption of



Digitized by Google

$100,000 of notes, that there remains still outstanding and unredeemed $200,000 more of notes, they perform the act which is called suspending specie payment.

The "specie-paying" banks of the United States have suspended and resumed specie payment ten times within the last fifty years; in 1811, 1814, 1819, 1825, 1834, 1837, 1839, 1841, 1857, 1861, and currency payment in 1873, and that averages once every five years; and every suspension causes a financial panic, and every resumption is effected after the stoppage of all business and a temporary return to the uncivilized system of swapping off in settlement, commonly called barter. And when the "specie-paying banks" have called in their loans and have "swapped around" and got hold of the other two hundred thousand notes promising to pay gold, they then announce that they are ready to redeem their notes in gold, their notes being all in their own vaults, in case the bank has not concluded to fail. Having no notes outstanding they are safe in saying they will redeem in coin. This is resumption.

Let us endeavour to go to the bottom of this matter; let us see what are the underlying causes of these financial, commercial, and industrial disasters, which have occured in England and the United States at least on an average of once during each decade of the last century.

If a man is not in debt himself and has no one owing him, he may not be a very great sufferer from a crisis, but in civilized countries most people are both debtors and creditors; this is especially true of those who are engaged in manufactures and commerce. Debt and credit are incident to civilized society, and under proper conditions may not be a serious evil, but when it is to the interest of one important and very influential class of society to get in debt to the utmost possible extent, to keep in debt as long as possible, and to get others in debt, the disturbances and consequent disastrous results will be measured by the power and activity of this debt-creating and debt-enforcing class.

Now, I make this broad assertion, that the primal cause of these ever-recurring crises is that the circulating medium in general use has been supplied by corporations and individuals instead of the national government. No bank or banker will commence the issue of circulating notes unless satisfied that such issue will be profitable to the issuer. A circulating bank-note is evidence of the

Digitized by Google

fact that the issuer is indebted to the amoumt of the circulating promises issued. The larger the amount of circulating notes issued and maintaiued in circulation, the greater is the profit arising from the issue. Hence, under the British system, we have the whole power of the banks of issue, interested in getting into debt, remaining in debt as long as possible, by keeping their circulating notes out, and in getting others in debt to them, in order to get their notes into circulation. In considering systems it is not necessary to condemn the individuals who operate those systems. Active, enterprising men will use such systems as they find and make the most out of them. Every bank of issue drives out its notes into circulation as fast and as long as it can get any one to take them in exchange for what it calls good paper, which paper is the evidence that they have induced some one else to go in debt. This inflation of circulating notes, and of bills and notes made by individuals in exchange for circulating notes, indicated by the line of discount, goes on until the country becomes so saturated with bank-notes that the limit is reached; no more can be absorbed, and the bank-notes begin to be presented at the counters of banks for redemption; as the calls for redemption increase, the banks are obliged to demand payment from those that owe them. This makes a contraction of credit and a contraction of the circulating medium at the same time. Whereas, for several years, the banks and their customers have been getting *in* debt as fast as possible, now they are all striving to get *out* of debt as fast as possible. Whereas, on the inflation wave, all were buyers, now on the contraction wave all are sellers. Whereas, with the inflation wave, prices of everything went up, on the contraction wave the price of everything goes down.

The fact is that, during the last century, we have been chronically afflicted with the financial chills and fever, and we will never be permanently relieved from the affliction until we take the issue of the circulating medium from those whose interest it is to inflate the issues until the country is in a raging financial fever owing to too great and too active circulation. Then comes the chill; the circulation is drawn in from the extremities and congested and absorbed at centers from whence it was issued; and the chill or panic occurs and then comes the sweat, the weakening emaciating process, the result of the fever and chill, after which the patient slowly recov-

Digitized by Google

ers, and when capable of enduring it, is inflated into another financial fever, followed by another chill, and another sweat, and so on running through the same course of disease during each decade.

We, who favor the issue of the circulating medium by government direct are accused of being inflationists; we are, on the contrary, anti-inflationists; we are opposed to this system of alternate inflation and contraction, and propose to put an end to the recurrence of these financial chills and fevers by removing the cause in the issue of the circulating medium, by those whose profit arises from inflation, and providing for the issue of circulating notes by the United States government. We favor a system under which government debt, not corporate debt, shall be represented in the circulating medium; and we propose to take away from the issuer, not only the temptation, but the power to force currency into circulation.

1. It is proposed to make the circulating currency of the country consist wholly of United States notes.

2. It is proposed to make those circulating notes redeemable on demand at convenient places in all the States, at the pleasure of the holder, in United States interest-bearing obligations.

3. It is proposed to so fix the interest rate of the obligation in which the United States notes are redeemable, as to make those obligations, and consequently the circulating notes equivalent in exchangeable value to coin, and it is believed that interest at the rate of three per cent., payable in coin or in fundable United States notes, at the option of the holders of the certificates, is high enough to secure this exchangeable value.

4. It is proposed to make these interest-bearing obligations reexchangeable at par for United States notes at the pleasure of the holder at the place of issue, and to have the daily expansion and contraction at each sub-treasury or depository in the United States telegraphed every night to the treasury at Washington, and then furnished each night to the associated press agent, that we may read in our morning papers the financial reports as we now read the weather reports, and with corresponding usefulness.

5. It is proposed to prevent any disturbance of the currency by the action of the treasury officials, by separating the currency department from those departments of the United States Treasury that receive and disburse the revenues of the United States.

Digitized by Google

6. It is proposed to prevent the government from discrediting their own issues by refusing to receive anything, whether gold, silver, copper, nickel or paper which it issues for circulation among the people, for customs or any other dues.

7. It is proposed to replace national bank-notes with United States notes as fast as the national banks shall voluntarily return their circulating notes, which they are now doing and will doubtless continue to do when United States notes are made redeemable in certificates of indebtedness bearing interest and equivalent in value to gold. The national banks will voluntarily retire all their circulating notes under those circumstances, and confine their business to discounts and deposits alone, which is the legitimate office of banks.

8. We are opposed to any amendment of the national-bank act looking to further exemption of national banks from local taxation or authorizing them to reduce the amount of security behind their notes. Private corporations should not be subsidized to do what government should do, and may do, with both economy and profit.

9. We desire in order to exempt the currency from any sudden or emperical disturbance by Congress, to establish a reserve of fifty millions of United States notes, to be reached only by the substitution in said reserve for notes withdrawn, *pari-passu*. United States bonds, known as 5-20s or 10-40s, in sums of not less than ten thousand dollars at the pleasure of any holder of such bonds, the holder of the bonds so hypothecated in the reserve to receive his bonds on the return to the reserve, of the United States notes withdrawn by him, less the interest which may have accrued on said bonds during the time the owner of said bonds shall have had the use of the United States notes as aforesaid. Thus supplying to our currency system a safety-valve to prevent currency panics, to prevent the rate of interest on loans on government bonds exceeding at any time the rate which the government pays on said bonds, and a gauge to measure with the accuracy of a steam-gauge, the pressure of the requirements of the country for more currency, which can be supplied when needed by reducing the bonded debt and increasing the floating debt.

Within the last century the steam-engine has been perfected, and all its wonderful progeny have been invented. In Great Britain alone, during this brief period in the life of nations, the force vol ved through the combustion of coal, and applied to the perform-

Digitized by Google

ance of mechanical work, is equivalent to the muscular power of at least one hundred millions of men, or to state the case differently, the result attained to is the same as if the actual toiling population of Great Britain had been increased twelve-fold. It is useless to multiply words in dwelling upon the wonderful effect produced by the invention of the railway; the magnetic telegraph, and other implements invented by man during the last century to increase his power over nature. I will only add that it will be a burning shame to the men of the nineteenth century, if they fail to make improvements in the facilities for exchanging the ownership of products, which shall be commensurate, with those which have been effected in the machinery of production, transportation, and the conveyance and dissemination of intelligence.

All great innovations are at first ridiculed. He who first suggested that the world revolves; he who first declared that the blood in the human body circulates; he who proposed to chain the lightning, and make it a messenger; He who proclaimed peace on earth and good will among men, as within the ultimate reach of humanity—all these have been met with scorn, ridicule, contempt, persecution, and the greatest with crucifixion. Yet, as the planted acorn develops the oak which the Creator had placed within its little shell, so humanity is gradually unfolding, in the civilization of this wonderful age, its great possibilities; and they who have observed past developments may confidently predict that distribution of commodities to all, according to their needs and services, will soon follow the developments of powers of production, and in order to secure such distribution the appliances for keeping all the people usefully employed and fairly remunerated, must be developed and improved, and to do this is the problem of our day—it is the financial problem.

The same potent thought and investigation, the same recognition of the possibilities of human progress, must be brought to bear upon this financial problem, that have evolved such wonderful results in art and science, in mechanics and chemistry. We must not be discouraged if our efforts are not appreciated, or if for a time they are greeted with contempt and ridicule by the schoolmen. Progress may be gradual but it will be certain.

Whether this business generation shall survive and enjoy immunity from panics and crises, depends much upon such efforts as

Digitized by Google

you have engaged in to-night. But whether this generation shall deserve and enjoy it or not, I predict a brilliant future for American finance—a system that will be adopted throughout the world; a system providing a currency of exchangeable value, equivalent to gold, never excessive, never redundant, always convertible, and never requiring suspensions. Though individuals may be unsuccessful, general panics and financial crises will become unknown.

I look upon the immediate repeal of the act of January 14, 1875, called the resumption act, as the first step in these reforms, and as a vital necessity to the well being of this business and industrial generation.

It is commonly called the "resumption act." Resumption of what? Resumption of a system of suspensions and panics. Each of these suspensions and resumptions involved financial and commercial crises in which not only fortunes were swamped, and families formerly in affluence, were rendered destitute, but also energetic, active, and useful business men, with fine executive ability, were forever reduced to the condition of employees to mammoth houses raised upon the ruins of smaller ones; mills stopped, and industrious men by thousands and millions converted into tramps, begging or robbing while wandering through the country in search of work. It is a well established historical fact that General Harrison's election in 1840 was secured by the energy, influence, and votes in the various States of those who had been made bankrupt by the crisis of 1837. It was a desire on the part of these men to have a bankrupt-law passed to relieve them from the incubus of debt which they could not hope to pay, rather than songs and party cries, that elected Harrison. The number of men who took the benefit of the bankrupt-act in the various States corresponded very accurately with Harrison's majority in those States. Panics referred to, occurred in the United States in 1811, 1814, 1819, 1825, 1834, 1837, 1839, 1841, 1857, and 1861.

In England, omitting previous suspensions of "specie payment" by the Bank of England, the first of which occurred when that bank was not quite three years old, 1697, the bank suspended specie payments officially and practically in 1797, and remained officially suspended until 1823—twenty-six years—though during the last three years it paid out coin for its notes when it had coin to spare and felt so disposed. The Bank of England resumed specie

Digitized by Google

payments officially and practically in 1823, and in 1825, just two years afterward, it suspended again, making the temple of British commerce a scene of unparalleled financial, commercial, and industrial wreck and ruin.

These experiences do not invite us to resumption of the British system which such statesmen as Gladstone and Lowe are now ready to abandon, or the perpetuation and attempted enforcement of the act of January 14, 1875, even assuming that the act contains the necessary provisions to secure a resumption of this system of resumptions and suspensions. In a word, without dwelling too long upon this subject, it may be suggested that you examine the records and ascertain whether under any system of finance it has been found practicable to redeem $100 of promises with anything less than $100 of the thing promised, if demand were made, and whether it be true, as before stated, that demand for payment has been made in England, and suspensions and crises have occurred at intervals of 8 years since 1793; and in the United States since 1811 at intervals of 5 years.

As the question is upon the repeal of the so-called "resumption act," and as the especial friends of that measure are of the old English school, as distinguished from the new English school, who are looking to an abolition of the fallacies of the old system, we will examine as to how often the act of "resumption" was postponed by act of Parliament. It will be found that, while we in the United States have been living under a suspension of the specie-payment and specie-suspension system for thirteen years, and have not yet postponed the return to that system even once up to this time, England was under suspension continuously for twenty-six years, and repealed its resumption act *eleven times*, prohibiting payment of specie by Bank of England February 27, 1797; extended to June 24, 1797; June 22, 1797, extended to one month after the meeting of Parliament; November 13, 1797, extended to six months after the close of the war; April 30, 1802—peace of Amiens—continued to March 1, 1803; February 28, 1803, extended to six months after the meeting of Parliament; December 13, 1803, war having been declared, extended to six months after the treaty of peace; July 18, 1814, Napoleon having surrendered, extended to March 25, 1815; extended to July 5, 1816; March 21, 1816, extended to July 5, 1818; May 28, 1818, extended to July 5, 1819; January, 1819,

Digitized by Google

Peel's bill extended it to 1823, and provided that a pound sterling in gold should redeem £4 1*s* in Bank of England notes, scaling up gradually to the mint rate of £3 17*s* 10*d*. Parliament was compelled to recede even from this in the session of 1822-3 on the pressure of public opinion brought to bear upon it by the disastrous results and demands even from country gentlemen that private debts as well as government debts should be scaled or more or less repudiated under authority of law. Parliament authorized the issue of one and two pound notes for ten years, of which privilege the old and dignified lady of Threadneedle street declined to avail herself then, but one million of one-pound notes was all she had to pay out very soon after.

Officially resuming in 1823 to pay coin for its notes, in 1825 the Bank of England was again obliged to succumb. She reduced her line of discounts about seven hundred per cent. between 1815 and 1824, and her circulation was reduced about thirty-five per cent., and that of the Scotch banks and private banks enormously.

After the desirability of resuming the English system, we must consider its practicability, under the bill. It is assumed by the bill that the currency is worth less than gold, because it is redundant—excessive in volume.

November 1, 1874, the total circulating medium in the United States was $924,228,246, wich was an average of $20.50 per capita.

At about the same date the amount of circulation medium in England, including all the items of the American estimate, was $26.82 per capita. The $20.50 per capita was considered redundant for the United States, though $26.82 was not considered too much for each Englishman. Verily, the principles that underlie the English system of finance are inscrutable! Why should $20.50 be redundancy in a country as extensive and new as ours, while $26.82 was not deemed redundancy in a country like England, almost like a village in its connections, using $1,750,000,000 of local bills of exchange in constant circulation as a substitute for bank-bills, $100,000,000 of exchequer-bills, and $2,000,000,000 of checks in circulation, representing bank-deposits, and with a clearing-house currency-saving machinery at London, but available for the whole country, where only one dollar in coin or paper is needed to make $135 of exchanges.

It must also be remembered, in this connection, that England is

Digitized by Google

no larger than the State of Iowa, that Ireland could be contained in the State of Indiana, and Scotland in the State of Maine.

While taxes in the United States are over $18 per capita for every man, woman, and child, the currency, including bank-notes, and legal-tender notes, and fractional currency, in circulation and in the Treasury February 1, 1876, being just $16.80 per capita, would, if divided all around among the people, share and share alike, and the tax-gatherer should come around just after, after-paying out the $16.40 currency, each person would be obliged to ask credit on the tax bill to the amount of $2.51. It is evident that the greenback is not depreciated owing to its redundancy. If we could close and seal up air-tight all the doors, windows, and other orifices in this room, and then connect by pipes coming through the floor with air-pumps worked by engines, we should soon be physically in the same condition in which the country is financially, commercially, and industrially—dying of asphyxia and inanition.

1. We have the hoarding-pump, that makes it so "hard to collect." If a man gets hold of any currency he don't pay a bill with it if he can help it, and if every one will hold on to $16.80 for each member of his family, there will be no currency to circulate.

2. Pump: $10,726,860 of legal-tender notes have been canceled, and, I presume, burned, under this resumption act, between January 14, 1875, the date of its passage, and the first day of this month, (February.) The bank-note circulation has been contracted during the same time about $9,000,000 directly and nearly $22,000,000 indirectly, under this act, making a total contraction under this act of bank-notes, legal-tender notes, and fractional currency canceled or destroyed of $42,368,663 in twelve and one-half months; or $3,389,492 per month.

Another pump: Since June 30, 1875, six months ago, government debts have been paid by taxing the people—debts not due—to the amount of $10,771,593, or $1,765,265 per month, these last-named pumps together drawing out the life of commerce, the hope, the courage, the energy, from your hearts at the rate, in dollars, of $5,161,058 per month.

All of my figures are official, or on the best attainable basis, and they will bear the fullest test of examination.

The first pump—hoarding—is of as much capacity as any; and every cry of "hard times," or financial danger, or death, is a stroke

Digitized by Google

of that pump, and exhausts both money and enterprise and action from the common fund.

If this room was being exhausted by air-pumps, and the question should be asked here, shall these pumps be stopped, and shall the windows be opened? some whose heads were very near the orifices where the air was rapidly pressing out would say; "By no means; I have plenty of air; I never was so well supplied." The faster the air is going out the more redundant it is in these air-centers. The average occupant would fall dead of asphyxia, while some cry, "too much air," and with reason, owing to their standpoint at the place of its accumulation for final departure. Such is the cry that is sometimes heard from certain cities; but the financial atmosphere is now becoming quite thin, even at these orifices.

The alternative is simply repeal this bad and cruel act, or witness the ruin of this generation of active business men. They are falling each day thicker and faster. When they are all gone there will be no need for currency, as no debts will be paid, and, confidence being gone, we will resort to the natural though barbaric system of barter. Moreover, instead of lowering the price of gold, the operation of this act has been to raise it. In the month of December, 1874, the lowest price of gold was 110½, the highest price being 112¼; while in December, 1875, the lowest price was 112⅝, and the highest 115¼.

In 1874, the number of failures in the United States were 5,830; liabilities, $155,000,000. In 1875, during the operation of this act, the number of failures has been 7,740, and liabilities $201,000,000. So say Dun & Barlow, commercial reporters. The loss on $200,000,000, less 33 per cent. realized from assets, is $120,000,000, equivalent to one-half of our cotton-crop, and about 50 per cent. more than the product of all the gold and silver mines of the United States, Mexico, and Australia during that year, the yield being $80,880,037. In California, in 1875, where business is done on a "gold basis," 237 failures, with liabilities of $5,281,000 indicate that one trader in every forty-two has failed in 1875, in that State. In Canada, say Messrs Dun & Barlow, with a low tariff, a most admirable (?) banking system on a gold foundation (!) and a light taxation, the number of failures have been one in every twenty-eight traders.

I include the statement regarding failures in Canada and Califor-

Digitized by Google

nia, to enforce the observance of the fact that a resumption of specie payments, which is claimed to be such by the financial Solons of the country is not the specific for the remedy of financial ills, on the contrary those false promises to redeem notes in gold when there is never to exceed one-third of the required quantity of gold available for redemption, intensifies and aggravates the evils. We must abandon the vicious and unscientific system of promising to liquidate all the indebtedness of the commercial world—on any day when a panic may sweep over it and cause demand—with $3,000,000,000. Three thousand million of gold coin, all that is to-day available for that purpose in Europe and America combined. All the gold coin in the world as asserted by M. Chevalier, in 1848, could be contained in a receptacle thirty feet long by thirty feet wide, and nine feet and a half high. All the gold coin and ornaments in the United States to-day, if melted down and moulded would not make a solid cube of fifteen feet. The idea of gold redemption of all debts on any day is simply ridiculous. The results of efforts to accomplish this impossible feat we have seen illustrated time and again in suspensions and panics. The idea of carrying on the business of the world solely with coin is preposterous and need not be discussed. The practicability of having a circulating medium composed of government-debt obligations, redeemable at all times, and in convenient places in government obligations bearing interest and equivalent in value to gold, seems obvious.

Let us then press forward in the work of securing for our country such a circulating medium which would be an absolutely convertible currency on a specie basis that is measurable as to quality by a specie standard, but not redeemable in specie. Specie basis and specie redemption are not synonymous terms, the first is practicable the second impossible, and has been proved to be impracticable by the experience of many generations. I have already detained you for more than two hours; I cannot further trespass upon your patience and kind attention; there are many points that I have wholly omitted for want of time, and I have been unable to dwell sufficiently upon others.

Let the people test, by their common sense, every argument that is presented to them by speakers or writers, and they will pierce the armor of sophistry and deceit, and will secure a perfect solution of the greatest problem of the age. This people and their institu-

Digitized by Google

tions are peculiarly qualified and adapted to such work. When evils become so manifest that they command undivided public attention, the people seek for remedies, and when they recognize and accept such remedies, their executive power to apply and enforce the same are, in a human sense, simply *omnipotent*. Before that power individuals and minor organizations sink into insignificance, and are overwhelmed by the rising waves of the people's will. The waters are already moving.

Adjourned to 9 a. m., Wednesday.

---

*WEDNESDAY, February 9, 9 A. M.*

President Stilson called the convention to order.

The following societies and industrial organizations were represented as follows:

STATE AGRICULTURAL SOCIETY.—President Eli Stilson, Vice-Presidents Geo. E. Bryant and John L. Mitchell, and Messrs. Dean, Boyce, and Field, members of the executive board, beside numerous life-members of the society.

STATE HORTICULTURAL SOCIETY.—President J. S. Stickney, and Messrs. J. C. Plumb and F. W. Case, secretaries, and A. G. Tuttle and Geo. P. Peffer, members.

NORTHERN WISCONSIN AGRICULTURAL AND MECHANICAL ASSOCIATION.—President J. M. Smith and numerous members of that society.

WISCONSIN STATE DAIRYMAN'S ASSOCIATION.—President Hiram Smith, and other members of the association.

BOSCOBEL AGRICULTURAL AND DRIVING-PARK ASSOCIATION.—Hon. George Brown.

SOUTHERN WISCONSIN SHEEP-BREEDERS' AND WOOL-GROWERS' ASSOCIATION.—Geo. Lawrence, Jr.

COUNTY SOCIETIES.

RACINE COUNTY.—Vice-President J. A. Casswell.

SHEBOYGAN.—Hon. E. Eastman, Hon. J. E. Thomas, David W. Gilbert, Esq.

LA CROSSE.—A. J. Philips.

FOND DU LAC.—Charles Heyer.

KENOSHA.—President Henry Blackman.

GRANGES.

WISCONSIN STATE GRANGE.—Daniel Williams, L. G. Rogers, E. H. Benton, F. L. Bacon.

BLAKE'S PRAIRIE.—Geo. W. Lee, R. L. Bingham, D. Balentine.

BLACK EARTH.—A. M. Partridge, Enoch Wood.

Digitized by Google

HAMPTON.—Edward Fairbanks.
SYENE.—David Whitson.
RIVERSIDE.—E. B. Thomas.
WELCOME.—X. W. Whiting.
LIBERTY PRAIRIE.—A. B. De Voe.
BEAVER CREEK.—D. T. Pilgrim, W. W. Woodard.
BELOIT AND TURTLE.—Lewis Clark, L. K. Cogswell.
LAKE.—Geo. Chase, Andrew Rile.
DU LAC.—S. C. Can, L. T. Rogers, J. C. Plumb.

FARMERS' CLUBS.

UNION.—N. M. Gleason, H. J. Wilkinson.
SKILLETT CREEK.—J. W. Wood, Levi Cahoon.
BLUE MOUND VALLEY.—Charles Trens.
LIVE OAK.—Secretary R. F. Roberts, P. O. Woodworth.

Numerous other societies and organizations were represented, but the names of representatives were not handed in. In addition to the above representatives, many of the leading educators, members of the legislature, and leading business men of the State, took a deep interest in the convention, and participated in the discussions. Prominent among them were President Bascom and Professor W. W. Daniells, of the State University of Wisconsin; Professor T. C. Chamberlain, Beloit College, now State Geologist; Hon. Hamner Robbins, Platteville; Hon. I. C. Sloan, Madison; Hon. C. F. Bliss, Racine; Hon. M. Anderson, Cross Plains; Wm. Sellers, Green Bay; J. Harris, Esq., Little Suamico, W. Orledge, Kenosha, S. D. Carpenter, Madison; C. H. Williams, Randolph; J. H, Williams, Fox Lake; W. Clark, of Green county, and Messrs. Adams, Sherman, Warner, Dwight, Flintman, Hall, and Graves, of Dane county.

President Stilson made brief opening remarks as follows:

GENTLEMEN:—We are assembled this morning again to open an agricultural convention, an assembly of comparatively recent origin. One reason why, in the past, agriculture has made so slow progress, is the isolation in which the farming population live; their want of confidence in each other; their want of a more thorough education, and the application of scientific agriculture, reconciling it with practical agriculture. The farmer in the past has made many and important discoveries, but in order to make them of real value they should be continued through a series of years, nearly a lifetime, and

Digitized by Google

it has been for each succeeding generation, and for farmers individually to experiment for themselves, and much has been lost to the farming community for want of more thorough interchange of experienced experiments, methods, and results.

The press in a measure has come to the assistance of agriculture, not only the agricultural press, but the general newspaper press of the country, to-day, are lending material aid to the advancement of agriculture. Farmers' clubs have sprung up all over the land, and last, though not least, agricultural conventions have been held. Experiments, in order to be of any value, should be continued through a series of years to demonstrate their truth or falibility, and it is only by the application of science to practical agriculture, and comparing the two, that we are to look for success in the future. In the past, too much time has been wasted and too many theories have been laid down, having their foundation only upon an imperfect data. Conclusions have been drawn which in many instances are but little better than assumptions. Wrangling and bitter altercation have been had over trifling affairs which science and practical agriculture should have at once solved as "whether wheat ash turned to chess or not," or whether the farmer should butcher his hogs in the first or last quarter of the moon; but we are at last making advances in agriculture, which has for its object the combining of scientific knowledge with practical agriculture, and for this purpose we must have a thorough understanding and comparing of practical experience with scientific agriculture. In the past, science has endeavored to teach agriculture independent of practical results. They attempted at one time to lay down the rules that they could tell by a chemical analysis of the soils what was necessary for the production of a crop. This has failed. Also, they have endeavored, arbitrarily, to teach us that science alone could point out the way to success, but this we deny. The practical agriculturalist must strike hands with the scientific man and pursue their investigations together. More than forty years ago the practical agriculturalist had demonstrated that blue-vitriol was a specific for smut in wheat. The scientist might have known that it had certain properties valuable for that purpose, but it remained for the practical agriculturalist to demonstrate that it is a specific, and it has been applied for nearly thirty years, with similar results. I have seen 4,000 bushels of wheat grown on the same farm in the

Digitized by Google

State of Wisconsin, in which there was not a particle of smut, simply by eradicating it from the seed-wheat.

Here is a law that has been proven until it becomes a fixed fact. The trouble with us as a class has been, particularly many of those who have not been long in this field, that they want to take a few imperfect data, and go to theorising. Now, leave your theory at home; bring us your facts. Let us collate and compare, and we are not going to deduce from those a scientific solution of all the problems and laws that govern agriculture in all its particulars, this year or next, but we are going to make progress; we shall develop and shall ascertain laws that are almost immutable, while others are, at least in the limited manner in which we understand them, nearly successful. I will instance to you the success that has been made in fighting the Colorado potato-bug for the last few years. The scientist might tell you that paris-green was a poison; but it remained for the agriculturalist to demonstrate that this was nearly a specific for this terrible scourge. The scientist has told you, and told you upon this floor, that mineral manures would supply all that was necessary for growing a crop, and the only question was, as to their experience in the cost of the two different manures; but it remained for the Royal Agricultural Society, of England, to demonstrate that this theory was false; that there was a large amount of waste by drainage, and the Royal Agricultural Society, of England, have proven that the loss by drainage by the application of manures, in the form of mineral salts, is more than double that from barn-yard manure; hence, in solving that problem lem, it would not only be necessary to reckon the present cost of each, but the loss of each by waste and drainage; so you see that with all the aid we can draw from science it is yet wanting, without the practical agriculturalist will devote his time and experience, and compare and examine it as applied to agriculture, so that the basis of simply comparing the cost of mineral salts with barn-yard manure in their first cost is not the solving of the problem, but there must be taken into the solution of the problem the extra waste that occurs by the necessary drainage. The salts being more easily soluble by rain, are washed in the drainage-water. When I speak of drainage-water, I speak of lands that are drained every, thirty feet by under-drains. The drainage-water has been analyzed and these facts found to be true. The loss is more than double by

Digitized by Google

the application of mineral salts than of barn-yard manure. This brings us to this practical thought. Barn-yard manure decomposes in that slow process which the growing crop can take up and save. It will last for years, while the other lasts for a single season, not more than two or three seasons, and often in some cases is lost in a few months.

Now, what I wish to impress upon you, as I said before, is that we should not come to too hasty conclusions. Let us compare experiences, and let them stand as experiences; let us go on from time to time, from year to year, comparing experiences and trying to apply science to practical agriculture, and we shall make rapid progress. That has been the case in England, and is becoming the case all over the United States, at least in those States where the most rapid progress has been made in agriculture. To show you one single fact of the advantage of education, and the advantage of combining practical agriculture with science and brains, I will point to the fact of the rapid progress that we are now making with reference to supplying Europe, principally England, with wheat, as compared with Russia. The per cent. that we furnish has been largely on the increase for a number of years, owing to our superior advantages and understanding in conducting our agriculture, and our superior facilities for transportation. Our per cent. is rapidly increasing upon Russia. That is an illustration of intelligent agriculture, as compared with those who are a mere force without being guided by the intelligence which the American people possess. With these hasty remarks I leave the question, thinking that I have suggested to you the course that I would like this and other agricultural conventions and gatherings to take, that we have less theories and isms, and more practical experience.

President SMITH, of the Northern Agricultural Society: President Stilson spoke of the waste of mineral and barn-yard manures. Do you claim that upon your own land, where you have underdrained the wastage of manure, either mineral or barn-yard, is greater than where your land is not drained? In other words, does the under-draining add to the waste of the manure?

President STILSON: I don't wish to be so understood. The under-drainage in these cases merely formed the test of the wastage in those manures. The analysis of the drainage-water would furnish the test of the loss. Without under-draining, perhaps the



Digitized by Google

loss would be still greater from the loss by washing off on the surface.

Mr. Benton offered the following resolution:

*Resolved*, That a committee of five be appointed by the chair to prepare resolutions expressive of the opinions of this convention on the financial and political questions of the day, the committee to report at 9 a. m., Thursday.

An amendment was offered to strike out the word "political."

Mr. BENTON: This is a mere objection in name, not in substance. The political action is unavoidable in this country. We don't make a move unless it is connected with political action. The sale of crops, and everything else, is political. It is simply to express our opinion what legislation we think is necessary for our benefit and good, not to be hampered, but to give us room to work.

Mr. ANDERSON: I think it is almost impossible to separate these questions. Every action is undoubtedly political that we want to take in regard to our affairs. It is all political.

Mr. CLARK, of Rock county: I think the less this convention has to say about politics the better off we shall be.

Secretary FIELD: I seems to me that we have not met here for political purposes, but to discuss certain financial questions, as well as all other questions which we believe appertain to the interest of the farmer and manufacturer, as in fact to all industrial organizations. I would like to see the amendment adopted so as to strike out the word "political."

Mr. Benton accepted the amendment.

President STILSON: We are here assembled as an agricultural convention. Although our results may have political effects, we cannot help that. We are going to endeavor, if possible, to steer clear of hampering ourselves with politics; nevertheless, as I said before, if our actions have political results we cannot help it, but do not let the convention assume a political aspect.

Mr. ROBERTS: I do not see the propriety of appointing a committee to propose resolutions expressive of the opinions of this meeting. I don't know how the gentleman, if he was on the committee, could propose or show what my opinions are upon any subject coming before this convention. I would amend that by appointing this committee to receive resolutions, and not to propose them. I move to strike out that word, "propose," and in place of that, insert "receive."

Digitized by Google

Mr. ORLEDGE: I, for one, should say that a committee of that kind would be exceedingly inappropriate in such a meeting as this. It seems to me that we are convened here to discuss questions on political economy, perhaps, or anything else we choose to discuss, but I hardly think it would be prudent for us to put ourselves in a position to endorse the ideas of any set of men in the State that were looking to politics. I presume there are a great many here that do not agree with me. Let us go on and discuss these questions, and discuss them freely, without regard to what the outside world may say, or the editors of the papers think of it.

Secretary FIELD: I think I can make a statement that will be be acceptable to the mover and to the convention. I move as a substitute for this resolution the following:

*Resolved*, That a committee of five be appointed on resolutions.

If this is adopted any gentleman can present a resolution; it will be referred to this committee and a report made to the convention for their consideration.

Mr. Roberts accepted the substitute, and the resolution was adopted.

Secretary Field moved that the Academy of Arts and Sciences and the agricultural convention hold a joint meeting this afternoon to listen to the papers on finance which have been prepared for each meeting.

Mr. ORLEDGE: I am very willing to discuss the money question at all times and on all occasions, with anybody. I do not suppose I know one-quarter of it, or one-third, but I know enough to hold myself against all ordinary or common men, but is it worth while for us to go out of our way to get up a particular discussion on the money question. Isn't it better that we should follow our own programme? If any gentleman wishes to discuss this question let two or three meet them and discuss it in the Assembly Chamber. It seems to me, Mr. President, imprudent to drag this thing in here. The discussion is not necessary for us here, and I think it would be imprudent. I would move that if two or three of the gentlemen of the Academy of Arts and Sciences, wish to discuss this question that we will discuss it here Friday morning at ten o'clock.

Secretary FIELD: I have no feeling in the matter. I wish simply to act with the academy as I am informed that members of each con-

Digitized by Google

vention are perfectly willing and rather anxious to meet together and listen to this important subject. I think it would be rather gratifying to the convention, and it would to me that both sides of the money question may be presented.

Mr. EATON: I don't understand that our worthy secretary proposed any discussion between us and the academy of sciences. He only proposed to meet jointly and hear certain papers read that have been prepared. Those papers appertain to the same subject. and all of them could be read jointly.

Mr. ORLEDGE: I suppose discussion was invited here. If these papers are not to be discussed, I don't know the object of having them read.

Mr. WOOD: There has been but little of late but discussions on the financial question, and I should hardly do myself justice if I did not say that I came up to this convention more to get away from them than to get into them, and it would be refreshing to me, while I remain here, if we would attend more particularly to the business of the agricultual convention, and get away from this everlasting din of politics which we hear on every side, and I should prefer myself to confine ourselves more particularly to the subjects which our name indicates—agriculture.

Secretary FIELD: It will not take one minute more to discuss this question after three papers are read than after one paper. Mr. Benton is going to read a payer on finance, and I supposed the convention was going to give him a fair opportunity. If Mr. Wood expects to get away from a discussion of the currency question, I fear he will have to leave not only this convention, but the State and nation too. I trust the finance papers will be read before the joint conventions.

The motion for a joint convention prevailed.

Digitized by Google

## THE FARMERS OF WISCONSIN.

BY GEO. W. LEE, BLOOMINGTON.

The ancient and modern history of man's civilization, ranks your calling as one of the most honorable and useful among mankind. In proportion as agriculture is developed, we find society advanced in improvement and in civilization. Turn back the page of history to all the past, and at no period has agriculture a nobler and a brighter record than the present page of American history presents. Under our benign institutions and our republican form of government, agriculture has found ample room for its fullest development, A free education of the masses, with a wide domain of cheap lands, combined with an endless variety of productions of the soil, form the basis upon which rests the noble structure. Under our republican form, each voter is a spoke in the mighty wheel of government, and equally responsible for his devotion to the maintenance of those equal rights guaranteed to all.

It is fit and becoming that all classes of industries and professions should meet in convention and discuss questions to them of vital importance in the race of life. A too common neglect of this duty upon the part of the farmer has opened the way, and a multitude of evils of an alarming character have crept in, endangering his rank, robbing agriculture of its reward, and threatening our national prosperity. What means those cries of want and starvation that come to us from the factories of New England and the hills of Pennsylvania? Why are the hundreds of thousands restrained from work, with none to give them bread? What means this great farmers' movement now agitating the country from Maine to California? Such things do not come without cause. In human affairs effects follow causes; results are accomplished by action. It is folly to shut our eyes and to profess not to see, and continue to sing praises over the glorious institutions of our happy land, until our institutions have disappeared, and we have rivited upon our necks the

Digitized by Google

chains of a worse despotism than the one from which our republic emanated. Is this an idle and imaginary picture? Let him who has followed the government of the United States in its helpless struggles with the combined power of capital, and who intelligently reads the present page of American history answer.

A nation may be rich, but the masses a horde of half-fed and half-clothed citizens. The working masses are peaceable and long suffering, when justice is done them. It is plain that the rights of a part of the people are invaded by the other part. That we, as a nation, have greater means of a more prosperous existence within our domain than any other nation, will not be denied. To what extent are we practicing the principles, "that the blessings of government, like the dews of heaven, should be dispensed alike upon the high and the low, the rich and the poor," let me inquire. It is an unfortunate state of affairs that makes bread-producing interests of the country the principal sufferers from railway extortions. The farmers' products must go to market, and railroads combine to demand what they please for their transportation. Then foremost among the questions of vital importance to the farmer is that of transportation. Without fair and reasonable rates, the farmer's life must be one of labor without profit. Efforts have been made to protect the farmer against the extortions of railroads, but little has been accomplished. Relying upon their great wealth, and immense patronage, they insolently defy the States that seek to control them. They have become a great power; their influence in controlling the politics and legislation of the State is decidedly marked. Slowly but surely they reach their hands towards the throats of the people, and if they are not met and conquered they will soon control the affairs of State. The question of transportation is one that must be met by the farmer, and one from which he must not turn aside.

A general survey of the statistics as shown by the census reports of the three last decades, and a comparison between the general manufacturing interests and agricultural interests, teaches us as a class a lesson. In 1850, the value of manufactured products, after deducting the cost of wages and raw material, was forty-two and one half per cent. on the capital invested. In 1860, profits on manufacturing capital, after deducting wages and material, was forty-seven per cent. per annum. In 1870, manufacturing capital

Digitized by Google

yields forty-six per cent. The *Scientific American*, in an article entitled, "the profits we pay," says that the sewing machinery that is annually sold for $65 to $125, cost from $7 to $15 to manufacture. In 1873 the net profits of three sewing-machine manufactories, was $6,000.000 each, and the agents receiving a greater profit, making a draft drawn from the farmers and mechanics of the country of $40,000,000 for this one article alone. Is it to be wondered at when we take into consideration the hundreds of thousands of other articles that we pay a similar profit on, that we, as a class, are poor? When on again referring to the census of the United States, we find that agriculture yields only three and one-half per cent. on capital invested, labor included. This could not be true with just and equal laws. Instead of a surplus accumulated in our hands who produce it, it is all, and more, found to be in the hands of a few rich men. We have cultivated fields of untold wealth. Factory and field has yielded rich reward; but to the farmer near by runs the murky stream of bankruptcy.

A revision of the patent-laws of the United States is a subject to you of interest and importance. The currency or interest question, that is the all-absorbing question of the day, ranks as the most important subject that can be brought to your attention. I ask the producers of this country, what are the causes of the unequal distribution of wealth? We see a class of men who produce nothing rolling in wealth, with fortunes varying from hundreds to millions of dollars, in contrast with the average farmer of limited means, who is taxing all his energies to make ends meet; who in the race of life is distanced in spite of his efforts of industry, intelligence, and honesty; who is lucky if he can keep the farm clear of mortgage and himself free from debt, and can educate his children and afford his family the comforts of our present civilization. How is it that the most useful class in the land, those who should be the most fortunate and independent, are the most oppressed, the hardest worked, and poorest paid. It is true there are instances of wealth among farmers, but they are exceptions. As a whole the American farmer is a toiling, over-worked man, from the beginning to the close of life. The real and true causes are: high rates of interest, combined with high transportation and high-priced manufactures. When farming, the productive industry of a country, that underlies the prosperity of all other kinds of business, only

Digitized by Google

pays at the rate of 3½ per cent., as reported by the census of 1870, how can the farmer pay from 10 to 47 per cent.?

As a class, we hold in our hands a vast power. One-half of the voting class are agriculturalists. Is it not folly to complain of grievances when we have the numerical strength to redress them? The ballot is in your hands. Under the name of party, party, party, fraud and infamy is visited upon us. Party, when organized for honest and legitimate purposes, that will secure the best results and inure to a common benefit, is beneficial; but never let us be led astray so far that exacting capital can compromise our honor and question our claim to intelligent places of honor, trust, and responsibility. Let the showers of imputed ignorance, which falls so heavily upon the farming classes, be an incentive that shall bring forth a more general diffusion of education among farmers. Let us dig deep and lay broad the foundations, using brains as the corner-stone on which to build, and we may not be "hewers of wood and drawers of water" for others, if we will but use the mind that God has given us. Let us this Centennial year anew set our sail, stand by the rudder and compass, start out anew, and boldly upon life's journey contend manfully for edual rights, and success will be our reward in the race of life.

---

## BETTER EDUCATION OF FARMERS A NECESSITY FOR BOTH THE PRESENT AND FUTURE.

BY J. M. SMITH, OSHKOSH.

To one who has studied the history of agriculture for the last fifty years, it might seem strange that I should choose such a subject. I am by no means disposed to be a croaker, or to ignore the actual facts that very many of our farmers are far in advance of those of fifty years ago. There are some present who can remember the condition of the farmer of half a century past. They will remember that they often saw the sickle of ancient, as well as of modern oriental days, in the harvest-field. Among the advanced farmers of that day it had given place to the cradle. Threshing was performed by the ancient method of treading out the grain with oxen

Digitized by Google

or horses, or else with the slow and laborious flail. No mowing-machines had then taken the place of the scythe. Our plows instead of being the beautifully polished steel instruments of to-day, were rude, uncouth things composed of wood and iron, principally the former, and were utterly incapable of doing their work either as easily or as well as the steel plows of to-day. Other tools of the farm were as a whole very far from being what they are to-day. There was some good stock at that time, but the vast majority of it of all kinds has been much improved. There had been a few attempts to start and support agricultural papers, but the living, thriving agricultural paper had not then been born. Works on agriculture were very few, and instead of being scattered broadcast through the land, were principally confined to the educated and the wealthy. In short, there is no doubt but that the system of agriculture has been improved more within the last half century than within the same length of time at any period in the history of our race. If this is a fact, as it undoubtedly is, it may be asked, are not the farmers keeping pace in improvements with other departments of industry? This is the main point that I wish to discuss, and to which I wish to call your attention for a few minutes to-day.

This world, or at least the civilized portion of it, is in a very different condition from what it was fifty years ago. The discovery of steam-power, and its application to ocean navigation, to railroads, and to almost countless other labors where it it used to economize human strength, the invention of the telegraph and its almost miraculous power in assisting the press to distribute information, the labors of the cotton-gin, power-loom, and many other things that might be named in this connection, have all combined not only to change the face of society, but have absolutely revolutionized the civilized world. Each one of these improvements in its turn, while it has added much to the sum of human hapiness, has made new wants, and these must be met by new expenses which are to be shared by the farmer in common with others, but which can only be secured by an increased expenditure. These expenses must be met from the profits of the farm, and this can only be done by the better education of the farmer. Nor is this all. Within the last fifteen years our political world has been rocked to and fro as if by an earthquake; and there have been times when it seemed to patriots as if our great republic was upon the eve of its final deso-

Digitized by Google

lution. Civil war has passed away, slavery no longer blights any portion of our land with its withering curse.

But there are other evils and other questions looming up in the near future that must be met, and the consideration of which may well make us both thoughtful and careful. The question of education is not yet settled. To-day there are vast numbers of our fellow-citizens in other States who are utterly destitute of any education except that of vice and ignorance; yet, they have the ballot in their hands and a voice equal to yours or mine in saying who shall hold the highest as well as the lowest offices in the gift of our nation. It is well known to intelligent men of all parties that in many instances not only in the past, but in each recurring year, these ignorant men are the victims of blatant demagogues and unprincipled scoundrels, who secure their votes and thereby elevate themselves to places of power and trust, when justice would consign them to permanent homes within the walls of their State penitentiaries. In connection with the question of national education, will come that of the taxation of churches and religious societies of each and every kind. National finance is also to be discussed and settled upon some basis which will be permanent as well as true and just. The great question of transportation is in a condition that is far from being either satisfactory or just; and, in my opinion, the day is not far distant when our national legislature *must* take up this question and decide it in such a manner as will at least put it out of the power of three or four men to meet in a little ten-by-twelve office, in New York or elsewhere, and in a one-hour conference depress the price of every bushel of grain, every pound of meat, butter, cheese, or other product which the farmer has for transportation. Nor does the conference of this famous quartet of railroad presidents affect only you and me, and perhaps a few others, here and there, but it reaches the pocket of every farmer that has produce to sell or exchange between the Alleghany and the Rocky Mountains, and, in the aggregate, to the amount of tens of millions of dollars. And for what? Is it a necessity? Not at all. The men simply have the power, and they use it. It enables them to pay dividends upon their hundreds of millions of watered stock, which represent no labor nor expenditure of any kind, and has no real value. It enables them and their dependents to live in a princely style that not a single farmer in the northwest could either equal

Digitized by Google

or imitate without becoming a bankrupt inside of twelve months. With all these and other questions that are sure to come up within the next few years, and some of them those in which farmers are more vitally interested than any other class, is not more education a necessity? These are questions of national importance. They are questions that will affect not only ourselves and those connected with us, but those who are to come after us.

It is said that when Abraham Lincoln was nominated, in 1860, over William H. Seward, for president, Mr. Seward remarked that power no longer lingered in the east, but had departed and henceforth rested in the valley of the Mississippi. This remark is undoubtedly true, and another thing in this connection is also true, viz., that more than half of the voting population of these States are farmers. Gentlemen, the power lies in our hands; the responsibility whether for good or for evil is upon us; we can not shirk it if we would, we should not if we could. Rather let us use it, but let us use it wisely and well. He who casts his ballot for his party, and persuades his friends to do the same, simply because it is his party, and from no better nor higher motive, is unworthy of the great privilege which he enjoys; and instead of being an intelligent safeguard of the republic is ever liable to become the dupe and victim of unscrupulous demagogues and political thieves, who are always and ever ready to attach themselves to any and every party, whereby they may themselves be elevated to places of power and trust.

It may be asked, would you abridge the use of the ballot? Not at all; but I would have it used more intelligently. How shall this be accomplished? This convention is one way of assisting in this work. If instead of one convention we could have twenty-five of them, held in different portions of the State, and conducted by the best men in the State, and then their best thoughts and ideas scattered broadcast through every village and every neighborhood with associations well organized and well conducted, where all matters connected with agriculture either socially, morally, politically, or otherwise, could be thoroughly discussed; where plans of operation could be agreed upon, and then carried out openly and in the face of all men; how long, think you, would it be before there would be a change and that change for the better? For instance, suppose that in each congressional district in the western and north-

Digitized by Google

western States, where the farmers have a large or controlling interest, they should organize, and instruct their representatives in the lower house of Congress to authorize and provide for a double-track railway from New York to St. Louis, with laterals reaching to Chicago and Cincinnati; such road to be either owned or controlled by the government, to be built and operated as economically as possible, the rate of freights to pay the running expenses and seven per cent. upon the actual capital invested, and no more. Suppose, further, that these representatives in Congress understood distinctly that behind these petitions stood the great mass of the farmers; that they were honest and intelligent, and in sober earnest; that they could be neither duped nor humbugged, nor trifled with in any way; what think you would be the result? I will not say that such a law would be passed and the road commenced inside of six months, but I have no hesitation in saying that there would within that time be more patriotic speeches made in the interests of agriculture than have ever been heard upon that subject in Congress from the birth of our nation down to this hour.

I have supposed this case because it seems to me to be the most feasible way of at least beginning to solve the problem of transportation. It seems to me to be practical and to be a point to which we must come sooner or later; and it is a move which must be made and carried on in the interest of agriculture. To inaugurate and carry out such a plan as this requires intelligent study and careful thought, and a general movement of those interested in the products of the soil. It might require us to send more first-class farmers to Congress and fewer second- or third-rate lawyers. If he should be really a first-class farmer, he would not be spoiled by going there. The second- or third-rate lawyer is apt to be ruined for any business by the time his term expires, so that even here the community, as far as affected in any way, would be the gainer.

Gentlemen, the statistics show this to be a very important question to the farmers, and demands our most careful attention. The census of 1870 shows our population to have been at that time 38,558,371. More than one-half of the entire population was then engaged in the different branches of agriculture. The total valuation of property at that time was $14,178,986,733. Of this vast sum, farms and farm implements were valued at $9,599,682,290, or

Digitized by Google

a little more than two-thirds of the wealth of the nation. These propositions will probably hold good to-day.

Now, let us turn for a moment in another direction. We have lately seen the organization of a new house of Congress. How many farmers have we in it? I have been unable to obtain the exact statistics, but I can assure you that the number is very small. How about the organization of committees? How many chairmanships are given to the interest that represents more than half the population of the nation, and more than two-thirds of its wealth? *Not one.* How about the Senate? I believe that not a *single farmer* occupies a seat in that chamber. Suppose we come nearer home. How many professional farmers have we ever sent to Congress from this State? I am not positive, but I think none. How many to the United States Senate? Not one. Now, gentlemen, I ask in sober earnestness, how long is this condition of affairs to continue? Is this a fair and just representation? Nay, more, is it justice to yourselves? I say it is neither fair nor right. It is justice neither to ourselves nor to those who are to come after us. Will any one tell me that we have no men in our profession in this State who are capable of filling the seats in our halls of national legislation honorably and well? Surely not. You will probably agree with me that such men in our profession are not as plenty as we wish they were. Then let us study, that we may the better perform these duties. Let us prepare ourselves by having a better organization and being better acquainted with one another. Let us know our rights and know how to obtain them. I would counsel no shadow of wrong to those engaged in any other profession in our country, but I would have them understand that we as farmers can find men in our own ranks who can represent us honorably and well in any and every branch of public life to which we choose to call them. Let us seek out such men as will represent us intelligently, as well as honestly, and bid chronic office-seekers and office-holders, as well as noisy demagogues a final farewell.

But, gentlemen, let us now turn for a brief space of time to the necessity of a better education upon the farm; for great and important as I deem the necessity of a better political education, the necessity of a better one upon the farm is if possible still more important. A wise man once said: "A nation's prosperity may be

Digitized by Google

measured by the intelligence of the farmers." It is upon the farm and in our own homes that our greatest and most endearing triumphs must be achieved. The truly successful farmer is not the creation of a day nor a year. There are a number of things that are requisite, and then it is a work of time. First, let us cultivate patience and perseverance. I do not at present recollect ever having known what I deem a really successful farmer, that was constantly shifting from place to place, or one who was ever anxious to sell and get to some other place. A change is sometimes well and even necessary and should be made with care and judgement. When a change has been made, let the farmer make up his mind that he is to make a home, and let it be the business of his life. I care not where you are, however beautiful your place may be in a state of nature, there is yet room for improvement. There is plenty of room for thought, for study, and the display of talent, if you will only be prepared to make the most of your opportunities. The first order given to Adam in the Garden of Eden, was to dress and keep it; this, of course, implies that it was capable of improvement. With us to-day it is an absolute necessity, and the man who attempts to conduct a farm for a series of years and makes no efforts at improvement is comparatively a drone, and if he is satisfied with that kind of a life, it may be said of him as it was said of Ephraim of old, "let him alone, he is joined to his idols." But you belong not to that class. The fact that we are here to-day is sufficient evidence that we are anxious to improve ourselves, and thereby improve our circumstances and conditions in life. In short, we wish to become scientific cultivators of the soil. I know that in some minds there is an objection to what are scientific or book farmers; suppose we examine this just for a moment and see what it means. Why do I study Johnson's work on "How Crops Grow," except to try and learn something of plant-life; or why do I read his other volume on "How Crops Feed," except to learn of their wants and how best to supply them? I read Bruckner and others upon manures, in order that I may be able to obtain such manures as my crops need, and use to the best advantage.

I read Stephen's books upon the farm and garden, Henderson and Burr upon gardening, Fuller and others upon small-fruits, Harris' "Walks and Talks upon the Farm," Lawe's and Gilbert's reports upon their experimental-farm at Rothamstead, and many

Digitized by Google

other volumes, and many of the agricultural publications of the day, and for what? I can not, and you can not, follow out all of their recommendations, neither must we allow ourselves to be governed by any books, without regard to our own circumstances, conditions, and situations in life. A recommendation in some volume or paper may be of great value to you in your situation, while it would be worthless to me. Another thing might be of much value to me, while the same thing, perhaps, might be an absolute damage to you. But, after making all due allowances, there are very many hints and recommendations, and accounts of success achieved by one and another, in various and different conditions, whereby we may be wonderfully assisted in doing just what we all of us are or ought to be striving after, viz., the largest possible crops per acre, with the least possible expense compatible with justice to those with whom we deal. So far as cultivation is concerned, this is my definition of scientific farming. If any of you have reached this point, I wish to learn of you, for I confess that I have not.

I wish to touch briefly upon one more point before I close; that is, the business of selling crops after they are raised. It seems to me that farmers are often very careless of their own best interests in this respect. My own situation for years past has been such that I have had to use the greatest care at times to keep from not only breaking down my market, but to keep it from getting so entirely demoralized as to be ruinous to my business. Many years ago I saw plainly that if I ever made my business a success, I must have a market outside of Green Bay. The merchants had been supplying the northern market for years with picked-up lots, sometimes nice and fresh, and sometimes not. Why should not I supply them direct from my gardens? Some of the Green Bay dealers objected to this, and more than once offered to take my entire crop and sell it for me, or to purchase my entire crop; but in either case they must have their profit, and they wanted a good one, as they claimed that they were running all the risks, and I none. I traveled north to Lake Superior, visited all the towns and cities upon the route, found out the best men, found them not only willing but pleased at the idea of purchasing direct from the garden. I promised them good articles, and that they should be fresh and first quality in every respect, and I have been careful to do just as I promised. The result was that I soon had a very handsome northern

Digitized by Google

trade, and a profitable one, and still retain it against all competition. But I soon saw that in some things I could compete in Chicago and other places with their home growers. Then came the question why not jump Chicago and sell direct to some of her customers instead of allowing others for drayage, commission, etc. The result of this has been that for two or three years past I have sold quite largely in Indiana, and some in the extreme southern portion of the State, and last fall and this winter I have sold quite an amount to parties in Denver, Colorado. Now, suppose that I had continued to sell my entire crop to the home merchants, and let them hunt up and supply the outside markets; for instance, suppose I had sold to a Green Bay merchant, and he to the Chicago dealer, the Chicago dealer to the Indiana or the Denver city merchant, what would have been the result? Simply this, the consumer would have paid the same in both cases. The middle-men might not have made larger profits than they were fairly entitled to have, yet their handling and commissions would have so reduced my price as to have made my business absolutely ruinous instead of a fairly profitable one. Much of my success, such as it has been, is attributable to the fact that I have always tried to have just as few men between the consumer and myself as possible. To do this requires an outlay of both time and money. It is necessary that you should know the condition of the markets in different portions of the country, their wants and where their supplies come from, the rates of freight, etc. There are men in the city of Green Bay who are ready and anxious to purchase all the wheat that comes into town, and have the money to pay for it as fast as it is delivered; they receive a commission for purchasing; it goes into the elevators; the proprietors receive another for handling, storage, etc. The wheat is shipped to Buffalo, and there re-shipped, and another commission taken; thence to New York City, and there changes hands from too to four times more before it gets into the families of the consumer.

Now, gentlemen, is there not some way of avoiding a part or all of these commissions? If I had one thousond bushels of wheat, more or less, to sell, it seems to me that I should hesitate long before I sold it, subject to all of these handlings and commissions, unless I was sadly in need of money. I would have it converted into as fine an article of flour as it was possible to make of it; and

Digitized by Google

then ship it direct to some merchant with whom I am acquainted, or could readily become so; that had to draw his supplies from New York or Boston, and also would be willing to pay a fair price for a first-class article. I could if necessary sell to him a little lower than he would have to pay for an article of the same grade, either in New York or Boston, and yet save to myself three or four commissions. In short, I should try and do just as I am now doing, sell as near the consumer as possible.

Gentlemen, these things are worth thinking over. Nay, more; they are worthy your best thought and attention. It is one of the branches of education, where it seems to me, that many farmers are sadly deficient, and where a better knowledge of their business would add millions of dollars every year to the net income of the farmers of this State.

There are other points upon which I would like to have touched, but time forbids and I will hasten to a close.

Gentlemen, our vocation as cultivators of the soil is the noblest and the grandest one that God ever gave to man. Having had the advantage of a good early education, having been a constant reader of the world's history, of the varied successes and failures of different departments of industries, I say to you to-day, that if I was again a young man with my present knowledge and experience in life; I know of no industry; no profession in life into which I could enter with such earnest zeal, and such warm-hearted enthusiasm, as into the cultivation of the soil. I know of none where there is so fair an opening for earnest, intelligent, enterprising, and persevering young men. I know of none that I would prefer for my own sons to enter and compete for success in life's battle. Do you ask how shall you keep your sons npon the farm? Make home pleasant. Make it to them and their friends the best spot upon God's round world. Fill your home with books, with papers, with music; your yard with flowers, your garden with frnits, and your lawn with shade-trees. Do you say that you are poor and can not possibly afford it? Gentlemen, I know that road; wife and myself have traveled it together, side by side, and know it all. We spent money for music, for books, for flowers, when it was impossible for us to furnish either ourselves or our little ones with more than very plain food and clothing, and yet, I think to-day, they were about the best investments that we ever made.



Digitized by Google

Farm-life is, and must continue to be, a life of industry and labor, but make it not a life of drudgery and slavery. Be the intelligent masters of your farms not their servants or their slaves? Let us hush all murmurings of discontent, and prepare ourselves one and all as speedily as possible to take our places where we should ever have stood, in the very front rank of our nation's progress, and not in its rear. Let us so fit ourselves to lead in the world's battle of life and progress, that those who come after us may be the better and happier for our efforts. The front rank is yours by birthright and by inheritance. It has been lost by carelessness, incompetency, and ignorance; it may be regained by concentrated efforts and persevering industry, directed by energetic and educated farmers who know their rights, and knowing will maintain them.

Mr. BENTON: The paper we have just listened to has indicated various directions in which we should travel to secure success, but it seems to me it lacks the essential quality that our president indicated in his opening remarks, for it has not shown us how to travel the road successfully except by some general principles. Those principles are right, but it is the specific direction we want. Now, preliminary to other remarks, I would state that he suggested the idea of selling our flour directly to eastern consumers.

Here are the difficulties. First, we run our own risks in the shipping of our products to the east. As shippers upon the railroads, all the responsibility, loss, delay, and damage upon the route are thrown upon the owner, upon the consignor. They also combine at the other end of the route to lay all the hindrances they can upon the market. For instance, in the city of New York, a combination took place in the chamber of commerce, among the dealers in that city, to this effect, that they would purchase in open market no grain coming to them unless through an elevator or ware-house receipt. Western men, finding the ware-house charges so large, had commenced shipping in bulk at their own risk to New York, to be sold. These men on ascertaining this fact, refused to purchase grain standing in the cars on the track. What are you going to do about it? They won't buy it unless you put it in their elevator.

Here is an unsurmountable obstacle; practically we cannot override these difficulties; we cannot surmount them individually. For instance, if I wish to ship a thousand bushels of wheat to New

Digitized by Google

York, as I know of a person a year ago doing, when wheat was about $1.50 in New York. He shipped ten car-loads from Oakfield, Wisconsin, with the prospect of having an increase of twenty cents on the bushel by not letting it go to Milwaukee and intermediate points. The shipper shipped directly to New York in his own cars. This wheat was delayed two weeks in reaching New York. By that time the price had fallen so the profit was all gone. If there had been any damage the shipper would have been responsible for it. Will the gentleman give us the practical road by which we can accomplish better results? Will he surmount these difficulties for us. He has also made another point. I had some experience myself. He says he went to the shores of Lake Superior and other places and made himself a market, where he sold directly to the consumer. He secured a larger margin of profits and opened a varied market for his products, and that they were always a superior article, being shipped fresh from his hands and always being what he guaranteed them to be. Gentlemen will remember that I made such a point a year ago before the horticultural society. It was of little importance what the article was if it was always up to the standard grade, or a little better; there was always a market for it, especially the higher quality of articles.

If Mr. Smith has ability and business tact, why don't he embrace in its benefits A, B, and C, who will ship with him, who have neither ability nor business tact, nor the knowledge to follow in his footsteps?

Mr. SMITH: I did state what my practice had been. I have not confined myself to the northern markets exclusively. I have been shipping to Indiana—jumped Chicago. I have not experienced the difficulties Mr. Benton alludes to in transportation, and in shipping directly to Colorado, instead of going through all the hands, my goods went direct, and reached Denver City within a reasonable time; as soon as I could reasonably expect. In those instances he relates, it is possible that no one may have been to blame. It is possible it was an unintentional delay. I will say for myself, I have had very little trouble in that way. I have had annoyances, and I have been swindled, to put it in plain language, by the railroads, but I have got my goods to market.

Secretary FIELD: I wish to say one single word. The point struck

Digitized by Google

me as Mr. Smith was reading his paper, and he stated the manufacturing, the agricultural, and other industrial classes had very little representation in the halls of Congress. I think the fault lies right with us as farmers, producers, and manufacturers. I do not blame any professional man, banker, lawyer, doctor, or minister, or any other profession for getting into Congress and taking up all of those fat positions if they can. It is a privilege they have; and if the farmers, producers, manufacturers, and those engaged in the world's industries will not give their votes for men that they know will represent their interests, they are certainly the ones who are to blame.

Another point. He speaks of the middlemen, the commission men, of that class of men who take from the producer the profits between himself and the consumer. Now, I agree partially with my friend Smith in this matter. I think there are many large producers who can afford to post themselves fully and thoroughly as to the markets, and to be their own middlemen. But take the small producer—the man who raises half a dozen hogs to sell, a few cattle, and products of the farm—he cannot afford it; he can do this: He and his neighbors can combine and take their produce to market on the same day, and take a car-load. For instance, if I have five hogs, another ten, another six, enough to make up a car-load, we can take them to market on the same day, and if we cannot get the price we consider just, we can put them in a car and ship them, and send one man along with them. The last farming I did, when I had the personal supervision of my farm, I would take my hogs to market, and if the buyer would not give me what I thought was a fair price, I would ship myself. I never shipped in my life, still I have loaded them into the car many a time, and got them ready for market, and the buyer would say, "Field, you don't want to go to market; I will take them," and I suppose he paid me as much, possibly more, for those hogs than I would have realized, for the reason he understood the routine of the business. As a rule I do not cry down middlemen. I believe they may post themselves fully in certain branches of business and are absolutely as much producers as the grower or manufacturer, if they can stand between the actual raiser of the product and the consumer, and pay as much for the product as the consumer can get himself, and yet make a profit.

Digitized by Google

Mr. CARPENTER: One word in reference to the election of class representatives occurred to me when I heard the paper read, and I think the gentleman stated the facts very correctly, but the remedy has been slightly touched up by my friend Field, and I think it is, in fact, the only remedy out of the trouble. A large portion of the voters on both sides believe, for instance, in railroad restriction. One of those candidates, as is well known, will not vote for railroad restriction if he is elected. The other one, it is well known, will. The question is, how will those voters go? The fact is, the straight-jacket of party is put on, party-lines are drawn taut, and they are corralled as wild buffaloes on the plains, up to the scratch of party. You must go to the party hit or miss. You occasionally see some of your own class there. I want it understood I do not believe in class legislation, or class representation. I do not believe a man should be sent to Congress because he is a farmer, or because he is a lawyer, or of any other class, but because he is honest and just in his aims and purposes, and is willing to carry out the aims, purposes, and desires of his constituents.

It seems to me that is the criterion we should go by. It is not always among the farmers who are delving in the dirt, and paying attention to their business, and racking their brains to make both ends meet, and keep the wolf from the door, that they can educate a man to take a seat in the United States Senate. But party-springs are drawn. It won't do to violate party-creed. They must train with their party, and run with the party-machine. If they would pull that straight-jacket of party off, they would get better men to represent them in Congress. When they get so they will not vote for a man who will directly or indirectly engage in any of these great steals, like voting away territory enough to make half a dozen States like Wisconsin, to soulless corporations, or like voting in effect $200,000,000, to build a railroad and give it away. When the people—the farmers—will come to the conclusion that they will put their foot down, and will not vote for that class of men, will not vote for any but those they can trust, then there may be hope. I am talking to both parties; to all classes and shades of party. If these farmers will go to work and educate through the press, they will do more than they will establishing stores here and there to buy without these intermediate profits. You should put your little pennies into a general fund, and establish and maintain

Digitized by Google

a popular press that should educate the great masses upon these very questions you are interested in to-day. As it is to-day, you can't get your ideas through these leading presses. They are against you. As it is, the farmers must combine, because all the presses of the country are combined against them. I don't say they receive any money for it; I only allude to the fact. You may go to Chicago, and with one exception, you can't get an article published on this financial question, except on one side; the same in New York. J. Y. Scammon told me that in the city of Chicago, although none of the papers would publish an article except on one side, that more than two to one in that city would vote on the other side.

Mr. CASWELL: There are peculiar circumstances surrounding Mr. Smith's occupation—dealing in perishable commodities that cannot be stored and laid away for speculation. When you are going to embark in business, you must know whom you are going to contend with. A man must decide for himself. I have bound myself down to it, knowing that energy, industry, and economy will place me upon the farm, beyond want. If a man looks into the arena of politics, and wants to go to Congress, he has placed himself outside virtuous circumstances, and within those vicious circumstances where no man ever returned pure to his family. I always lived on a farm, and don't care whether greenbacks go up or greenbacks go down. I know, and have the assurance, if I go to that mother earth, it is as Red-Jacket said to Harrison, when he told him to sit down by his Great Father. Pointing to the sun, he said: "The sun is my father, and the earth is my mother; where so fit a place as for her son to recline on her bosom," as he seated himself upon the earth. We want to grow rich so fast. We are not willing to be like the little stream, but desire to be like the mountain-torrent. When a man goes to farming he wants his thousand-dollar cattle, and it is a failure; you cannot make all farmers alike; it is impossible. You must understand this one thing, when you go into general farming you come into competition with men. They tell us how well our brain can grind out these great problems, but that is only tickling us to draw us into their hands. Let politics go to the dogs; let the currency go to the dogs. As far as that is concerned, it will regulate itself.

Digitized by Google

Mr. ADAMS: My business is tilling the soil. We are looking for remedies for existing evils. This morning, while the paper was being read by Mr. Smith, my attention was called to one point in particular, where he was speaking of our lack of representation in the national Congress. I think that so far as our State legislatures are concerned, we have representatives enough in those bodies. It is true we have but very few in the national councils. It seems to me that this may be easily remedied. Public sentiment at the present time is wrong in selecting men for public positions. You are members of your respective political parties, and I call you all to witness while I state that in our primary meetings, caucuses, and conventions, at the present day, the first question asked, when the delegates come together, is not whom do we want to serve us, but who wants the position. Well, now, that is not the right course for us to take, and we are just as much to blame as any of the other classes in the community. The question that we should ask should be this: Whom do we want to fill our public positions? I tell you that more than three-fourths of those who are eager aspirants for the place are the least fit for the position. They may be talented, educated, possess excellent business qualifications, and at the same time they ought not to be trusted. Now, the professional classes have many advantages in obtaining high position, like Senator of the United States, and other positions of trust. In their professional life and in their extended intercourse with the world, we admit that by those influences and those advantages, that they are especially qualified, by learning, ability, and so far as experience is concerned, to fill those places. I believe by taking this course in our political meetings, from caucuses up to the State convention, we could place these men there. The men we select are the eager aspirants, while if men of more modest pretensions, men of honor, integrity, and ability were selected, we should be better represented in the higher councils of the nation.

President STILSON: I will contribute my mite in regard to one question raised by Mr. Smith with regard to marketing our produce. Experience is worth something, and that is what we come here for, in part, at least. Well, he is right in theory, yet I think he will be found to be wrong in that particular commodity, wheat, as an article for the grower to ship as a rule. The profits in mill-

Digitized by Google

ing are so small, that as a rule the profits are more than counterbalanced by the losses of the shipper, with his imperfect knowledge. At least my experience has been, that I have never made it a success in shipping flour instead of selling my wheat. True, I have the advantage of a home-market, the large number of mills that are available within a short distance usually give us the Milwaukee price for our wheat; but there are other commodities to which his recommendations are applicable, more or less, to all farmers throughout the State, to deal directly as much as possible with the consumer. I have found this the case with many things, especially clover-seed. I have shipped large quanties of clover-seed directly to the consumer. And here let me illustrate the difficulties we have to submit to—the impositions that are put upon us where we ship to our agents in Chicago. For the purpose of catching them I have shipped the surplus that I had to commission men, invariably shipping an odd number of bags and watching the market, I have found a report of ten to fifteen cents less a bushel than the market report. I would notify that man of the fact, and that I would have no further need of his services. I have found men who would make correct reports, and what they were selling for. Many of our smaller articles can be sold direct, or at least let them pass through as few hands as possible. There is another thing besides wheat that I have never been able to ship directly without the aid of the commission men, and that is the large clip of wool I grow. I shipped to Justice & Bateman, of Philadelphia. My friend, a commission man, shipped at the same time wool not worth as much as mine and received at the same time two cents a pound more than mine sold for; because the commission man was a regular shipper he could obtain more than I obtained for mine. As a rule I have succeeded admirably with my wool, but I have generally sold it at home, and in many cases directly to the manufacturer. Those are the two articles I have never made it pay for me to ship—two staple articles—but in other things I have succeeded in dealing directly with the consumer, and largely to my advantage.

Digitized by Google

## THE FARMER IN POLITICS.

BY WILLIAM ORLEDGE, KENOSHA.

I cannot commence a paper on this subject in any better way than by repeating to you the following lines from the writings of Dr. J. G. Holland:

"God give us men! A time like this demands
Strong minds, great hearts, true faith, and ready hands—
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who can stand before a demagogue,
And damn his treacherous flattery without winking;
Tall men, sun crowned, who live above the fog
In public duty, and in private thinking;
For while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds,
Mingle in selfish strife, lo! Freedom weeps,
Wrong rules the land, and waiting justice sleeps."

One would think that, if God would condescend to "give us men" of this character, the farming class is pre-eminently the class that should produce them. There are none so truly independent of the likes and dislikes of others and the caprices of fashion or capital.

The farmer is an independent laborer. Necessity, stern, unyielding necessity brings all to him, and compels all to pay for his productions. By virtue of his ownership of the soil, he controls his labor, and over it none other holds any rightful or necessary mastership. By virtue too, of this, proprietorship, is he more directly, if possible, interested in a strict, economical administration of the government, in the peace of the country, in its prosperity, in the security of all in the possession of the full reward of their labor, and in the full employment of the people, than any other member of society. Therefore is he called upon, both by duty and self-interest, to take an active part in all organizations looking to the peace

Digitized by Google

and prosperity of the country. From his independent position, he is more free to aid in any movement towards reform through political action. And the demands of self-interest insure that his political action, if guided by intelligence, will always be in direct line with the interests of labor in other industries.

In stating these proposition, I am not forgetful of the material value to the country of *all* workers, whether of brain or muscle. Theorists, the thinkers of the world, are continually manifesting their industry and worth by presenting to us, as the fruit of their labor, new ideas, enlarged and advanced views of men and things, improved machinery, or valuable literary works, that fill our minds with a rich store of knowledge, which the busy work of our daily life prevents us from getting in any other way. But to my subject—

### THE FARMER IN POLITICS.

Having been born and bred a farmer I shall naturally speak from the stand-point of a farmer. I acquired my knowledge at the tail of a plow. My education, what I have, commenced in the field, and has been pursued amidst the cares and conflicts of every-day life. Therefore, you must not expect too much of me. I come too, of a class

> "Whose hearts ne'er bow, but to superior worth,
> Or seldom fail, in their allegiance there."

Thus being by birth and education free, and independent in thought and character, I cannot stand idly by, and see my brother farmer drifting into a bondage, more dangerous and repulsive than negro slavery—because the slavery of a higher intelligence—without making an effort to awaken them to a sense of the danger that surrounds them. And herein may be found one reason for my speaking to you of your connection with, and relation to politics.

Another reason may be found in the grief I feel in noting your want of independence in thought and action, which is as necessary to your advancement in material and moral, as in political power.

I have carefully measured the difficulties and dangers that attend the handling of this subject. I understand its delicacy, and how personal and political enmity may strive to abort my efforts, impugn my motives, and antagonize my class against me. And were I to study my own personal interests, I certainly should not touch such a subject as this. But, relying on the integrity of my purpose,

Digitized by Google

on your sense of justice, and the demands of the occasion, the sincerity of my convictions, and trusting in God for that succor he alone can give, I shall proceed to give you my views in all kindness, but with such directness of language, and fearlessness of criticism, as the subject demands and a proper respect for you and myself will permit.

Masters of the soil, you fail to own yourselves. Your prejudices and idiosyncracies make you suspicious of your best friends; and fear, the offspring of those idiosyncracies, leads you into many errors, which an independent exercise of your better judgment would teach you to avoid.

You exist only for two purposes, seemingly, in the estimation of the cunning political demagogues that duplicity has produced and your folly maintains; the one is to grow food for the people, the other to pay taxes for public officials to steal. You seem to be mere puppets in their hands and move as they pull the wires. You allow yourselves to cast votes prejudicial to your interests and adverse to the dictates of your intelligence. You allow men—who hold official position—through party machinery to control your footsteps and dictate the paths you shall walk in. You allow opportunities to pass by unimproved by you, which are seized by your servants, and used to place toils around you; and instead of using your power to control, you yield yourselves a willing sacrifice to your party's safety.

The fathers of this, our common country, in defence of their liberties plucked from a king the brightest jewels in his crown; and to secure to their descendants the full measure of those liberties, sought to place such guards around about the government as should shield them from the dangerous powers they had at such cost of blood, treasure, and personal sacrifices overcome; and in the prohibition in the constitution of the primogeniture, fondly hoped they had secured us at once, from the curse of hereditary rulers and the tyranny of concentrated capital.

But good always has an attending evil, and in our day another power has taken possession of the government and is controlling it in its own interest; a power more cunning and grasping, richer in wealth, more unscrupulous and less responsible than the barons of the middle ages, and ten times more crafty than its merchant princes; holding us down with a grip of iron, none the less degrad-

Digitized by Google

ing, because the hand is encased in a glove of velvet. "A power"—that Mr. Thurber of New York says—has "forged a perpetual charter, granted without consideration, into a spindle to twist the gossamer thread across the chasm of death; and that it needs only unscrupulous managers to become a worse tyrant than Nero—a more dangerous master than Robespierre."

And this power you have but imperfectly weighed or measured, nor have you counted the sacrifice you must make to successfully combat it, or the courage and daring necessary to subdue it. And, "interest"—the thing it uses to increase its own strength, and weaken yours—you are told by partizan leaders and a partizan press, you must not touch, to curb or control. And although we have independent farmers, thousands of them, as the world measures independence, we have but few that dare, or are able or willing to bring in opposition to it the strong arm of prudent regulation, or do we place ourselves in an attitude that shall bring it to a realizing sense of the danger of arousing us to anger; neither have we manifested a desire to secure to our interests the minds that would command the respect of its possessors, or taken proper steps towards shaping the policy of the government in the direction of our own interests. Our efforts, as yet, do not do much credit to our ability or our judgment.

We continue to fill the seats of Congress with men who are pledged to other interests, or are held by the stronger power of self interest to work against us. And if we fill the seats of our legislatures with men of our own class, they are so accustomed to being led, that a mere sprinkling of professional men is sufficient to control all legislation. And so our rights are permitted to slip away, our privileges yielded up a willing sacrifice to capital, vice engendered, and fraud and deceit encouraged, until corruption, nude and beastly, stalks abroad in the light of day, and hovers even at the door of the highest official in the republic.

There is, it is true, a seeming awakening of the people to a sense of the danger that surrounds them, but I fear it will end in seeming; the ghoul will hide its head awhile, a partially aroused people will become satisfied, and then relapse into slumber. When capital, always alert and crafty, will again play upon our weakness, and delude us into throwing power into its hands, or, if necessary, will, boldly and unblushingly, place its purchased tools in the seats

Digitized by Google

of our legislatures, who will make laws in defiance of the people's will, and by whom outrages will be committed against our best interests, and this, the result of your failure in the due performance of your duty now, will possibly—I hesitate to say probably—end in another bloody revolution.

It seems to me we should pause here and ponder on the situation. It is time, we farmers, and especially the younger men, who have enjoyed such advantages in education, and are to-day enjoying such privileges in society, and opportunities from so many sources for acquiring knowledge, should begin to think for ourselves. This being led and controlled by others—this putting power in the hands of men, whose interests are not our interests, is not only dangerous to the nation, but undignified, unbecoming our manhood, and derogatory to a proper self-respect. To think, to act, to do for ourselves, to find our representatives in our own ranks, is the need, and not only the need, but the duty of the hour. To forget our jealousies, to rise above our prejudices, to cultivate and develop the talent and ability of our young people, is a task to which we should devote ourselves, and should in its interest be willing to make sacrifices, such as are made by men in all countries and at all times, who value liberty, equality, and good government at its true price. For this, the grange gives us a grand opportunity, and if it fails, it will fail because it does not seek to educate its members in the line of duty, and instill into their minds a deep appreciation of the responsibilities that rest upon them.

I fully appreciate the necessity of the farmers obtaining through the organization, as much direct and immediate pecuniary benefit as possible, and shall be happy at all times and on all occasions to co-operate with them for that purpose; but I look upon this as only incidental to the great aims, the high and holy purposes of the order. The necessity is apparent and the duty imperative, of impressing upon its leading men as the great primary object, the educating and cultivating the minds of the members.

These remarks apply with equal force to this association. But this association, I am free to say, is more liberal in its conduct and the expression of its views, and in the discussion of all questions, allows a greater freedom and larger latitude than the grange.

It is not so constrained and trammeled with rules and regulations that tend to dampen our ardor and repress the higher aspirations

Digitized by Google

that come of mental growth. I do not wish to be understood as censuring the Grange, or as setting this association above it, but I am speaking to farmers, and both are farmers' organizations, susceptible of doing much good to our class, and I cannot help speaking freely of both. I look upon the Grange with the highest respect, but being circumscribed by dogmatic rules and regulations, as it necessarily is, it is kept within too narrow lines to develop political power, and its friends will fail in their duty if they attempt to use it for that purpose or force it into a political action for which it is unfitted, and which is incompatible with its objects and its duties. Yet it can do a good work, by developing minds to bear opposition, and by teaching its members to bring their preconceived notions under the purifying influences of free debate. And I look upon this association as a free school, wherein free thought and free speech is tolerated, freedom in debate encouraged, and serious deliberations on all questions made necessary to all individuals who took part in your discussions to save them from defeat at the hands of the well-read and sound thinkers ever to be met with at your meetings. There is much in both of these organizations for us, as farmers and citizens to be proud of. The Grange is our primary school, and should be encouraged by all of us, because out of that, if properly managed, will come a class of minds enlarged and developed by its teachings to sustain this society. And out of this association, if it be well conducted, will come a class of minds which, being enlarged by cultivation and liberalized by free thought, must ere long give to the farmer his right position in politics, and fit him for the highest responsibilities in the government.

I do not expect, I do not know that I wish to see the farmer a professional student of politics or literature. But I should like to see him sufficiently thoughtful of his own interests, to be able to afford sufficient time and money, whereby to gain the intelligence necessary to guard those interests. And I should still more like to see him encourage in his home, in his district school and in the grange-hall, the study of standard literature, and especially works on political economy and political history, so that his children and his neighbors' children shall obtain a greater knowledge and a better understanding of their duties as citizens, thereby gaining a greater assurance and faith in their own judgment, when the time comes for them to apply that knowledge; for with their minds

Digitized by Google

thus trained to the study of close logical thought, there can be but little doubt of the perpetuation of our political institutions in all their original purity and simplicity.

In speaking to you, as I am now, I cannot avoid, if I would, bringing the question of party politics before you; in short, it is through the lessons taught by our mistakes, that we must come to the knowledge we need so much; but, in speaking of party politics, I do not intend to speak as a partisan, and therefore I shall speak in general terms, and not stop to particularize. The last two years of Wisconsin politics are full of instruction to you, if you will but turn your thoughts back for awhile to examine their peculiarities.

As I look back, I can see but little difference between parties, so far as subserviency to the purposes of capital and a disregard of the interests of the producing classes are concerned. The leaders of both parties are generally parasites, or men who are not producers, and their prejudices and sympathies are with the corporations and the usurers. When the republican party is in power, the democratic leaders tell their followers that the acts sought for the benefit of capital are all wrong, but let the republicans pass them, and the people become awakened to what the republicans are doing, and drive them out of power; the democrats will take their places —a change is made, but only in party names—the democrats are now the subservient tools of capital, and the republicans play their game back again, and thus the people are ever cheated, and monopolies get all the protection and favoritism they desire.

And party fealty is so strong that partizanship overcomes your better judgment, and so party is ruling the country, and we are being dragged down to ruin through party. Villainy and fraud are winked at for the sake of party, and the honor of the country is sunk, and the stability of the government is threatened, that party may be sustained. Aye, party has been held above justice, above country, above honor, more sacred than the constitution, and above law; dearer than progress, dearer than right, dearer than self-interest, dearer than patriotism, and above duty. Party has held the farmers of this country as tightly and rigidly to its behests as blind religious bigotry holds the zealous recluse to his church.

The isolated life we have led has had much to do with this, and the grange and the farmers' club have not had time to eradicate the

Digitized by Google

evil. The correct observer of events must, however, acknowledge the change that is going on, and although many of us are apt to become impatient at the slowness of the growth of a higher intelligence and a greater development of intellectual power, yet the most ascetic, must admit, that a rapid progress is being made, and the independent action of the few gives good ground for hope, that in the better cultivation and broader range of thought now being manifested by our people, the evil of which I complain, will be lost in the practically educated minds that will control the future. But feeling deeply the obligations you owe to your class and your country, I cannot but grieve, at this time, for the want of that intelligent concert of action, that is so necessary to secure the possibilities that have been presented to you. The allegation of the parasites of corporations, that farmers are opposed to new commercial advantages is not true; there is not a farmer in this State or any other who holds such opinions, and none, but are pleased when any arrangements are made that increase the facilities of commerce and develop the wealth of the country. And the expressed determination to control corporations has grown out of no such contracted idea, but is rather the outgrowth of a tyranny and heartlessness in their management, that taxed the people unmercifully and discriminated in favor of friends at the expense of the public good.

And this control, though perhaps, sought to be obtained through a crude and illy digested law, yet had coupled with the wish for self protection, a sense of justice to the stock and bondholder, and from the first there has been a growing desire to exercise the power with prudence in accordance with the best interests of the State. A full expression of this is, but to be just to ourselves, and if mistakes have been made and criminations and recriminations indulged in, the sooner you take the dignified and honorable position due to your class, the better for all concerned, yielding nothing to fraud, force or chicanery, but dealing in righteousness and justice with the great interests at stake as becomes men who hold the power of the State in their hands. Believe me, this is no pleasant task to perform; I feel the delicacy, the particular delicacy, that attends this question, and I know how ambitious men may again teach some of you to look upon such ideas as these with suspicion, but my interest in and respect for you, impel me to dare to speak the truth, and it is necessary, it seems to me, to bring to your no-

Digitized by Google

tice the onerous position you hold in the community and the duty you owe to coming generations, to arouse you to the necessity of evading the toils of designing men and breaking the bonds a centralized party is riveting around you.

In this I am not putting your danger, your power, or your duty, in the least degree above what relatively belongs to you, nor am I setting you above or in antagonism with any other class of people. Statistics show that you outnumber any other one class of people, and almost equal every other class, and that you represent more material wealth; and that your labor and your wealth is more generally diffused throughout the country, and more directly connected with other industries than any other labor; that you are poorer paid than any other class of laborers, that your business returns you less profits, a smaller amount per head, and that money earns by the simple interest capitalists fix upon its use, three times as much as your labor produces, and this interest determines the price you shall pay for what you buy, as well as the price you shall take for what you sell; and capital, controlled by a high order of ability, is ever vigilant, is ever looking to its own advancement; ever smothering its passions and prejudices; it never allows itself to be hampered by platforms or to be deceived by its candidates; it pays when necessary for services rendered and never deserts its friends. Yet, with all this continually before us, continually being forced upon us, and continually being pounded, as it were, into our minds, we allow our prejudices to over-awe our reason; allow ourselves to be allured from the path of duty, by the plausible and insidious utterings of the paid tools of capital; allow ourselves and our dearest interests to be swept into the maelstrom of fraud and deceit they create; fail to be just to each other; and neglect, aye, refuse to pay for sevices rendered, be they ever so valuable, or stand by our friends, be they ever so true.

It is, therefore, no wonder, that in political action the farmer has not the consideration to which he is entitled; it is no wonder we have ceased to hold the respect of the people at large, or that our fellow laborers in other industries fail to put further trust in our professions; it is no wonder that merchants and manufacturers treat us with derision, or that we receive the scorn of capital, the sneers of the city press, and the profound contempt of so many of the bar.



Digitized by Google

Our class does not lack intelligence or ability, but this cannot be made manifest, until the great mass of our people are ready and willing to concede to them the same courtesy, respect, and confidence they now so humbly and submissively yield to lawyers, merchants, and capitalists; until in short, they are willing to follow the example of capital, smother their passion and prejudices, pay less attention to platforms and more to candidates, pay liberally for services rendered and never desert their friends.

You may feel that I am too severe on you, that I am pressing too hard on you. I wish to say to you that I did not seek this opportunity, but it being offered, I accepted it, with the determination of using it honestly, and I think upon reflection, you will find I have not gone beyond the bounds of truth. It certainly was not my intention to do so, and if I have simply told the truth, and held the mirror up before you, so that you can see yourselves reflected in the glass, I thank God for the opportunity, and I wish I dared to hope it had been made the most of.

There are questions immediately connected with this subject which I should like to touch upon, particularly the money and interest questions; but as I understand others have or will bring these before you, I forbear, and now proceed to present some of the most prominent remedies which I conceive to be applicable to your case. All remedies intended for our grievances must be based upon thought—earnest, protracted, well-directed thought—thought that goes away out of self into the great, common field of life, expressing a great sympathy with humanity, and an acknowledgment of our dependence on, and desire for, the well-doing and prosperity of all mankind. It should be our endeavor to mould the policy of our government so as to make it what it professes to be, the concentrated power of the people, directed to producing the greatest good to all. Not, however, in a paternal character, but by directing and teaching, as far as possible, the simple truths of self-dependence, keeping within the bounds of the constitution and our bill of rights, its power only to be brought to bear on the business of the country when the power of weaker organizations fails to secure us a just protection against the encroachments of concentrated wealth.

We should cease attaching ourselves to partizan political organizations, except for specific purposes, and should learn to hold our allegiance to party under the direction and control of our intelli-

Digitized by Google

gence. We should learn to give our support to such candidates and to such measures as will shield all producers from injustice, and give to them all the consideration their numbers and interests demand. I do not forget that, in a country with a government such as ours, two political parties are essential; but leaders of political parties would be a hundred times more careful in the administration of the government, more economical in their dealings with the finances of the country; would be more intensely interested in doing right, were they less sure of our votes, were they taught that we hold them as our own, and would do with them as we please.

Should we but take this stand—letting politicians know they could not rule us—we should find them just as anxious to work in honesty and forbearance toward us, as they are at present to manifest their carelessness for our wishes or our respect.

There are other things that stand in the way of a well-regulated representation of diverse interests, and a want of a proper attention to the exercise of the franchise by the better and more intelligent class of our citizens is not among the least of them. At present, we are governed by the most shiftless and worthless class of our people. Candidates are not nominated or selected, as a rule, especially in our cities, because of their honesty, capacity or intelligence, but because of their influence over a floating population—or over others who control it who have no interest in the country, or any conscience to govern their conduct; purchasable and venal, they are the tools that demagogues and rascals work in our legislatures with, and a blind adherence to party compels those who should control to swallow the filthy mass of corruption presented, or remain at home in disgust. There are various remedies presented by men of note and character for this state of things; the household vote as proposed by Judge Doolittle in his speech at Rockford, Illinois; the cumulative vote as proposed by Mr. Morrison, M. P., in England; proportional representation as incorporated into the constitution of Illinois in the year 1870, and one or two others, each of which has its advocates, and each no doubt has some good points worthy your serious consideration, but I have no time now to discuss them, and if I had, I am not sufficiently acquainted with their details or their merits to be able to lay them before you intelligently. That a reform in this direction is necessary to our welfare and to the life of the republic few will dispute, and believing so, I

Digitized by Google

mention it at this time to draw your attention thereto, as it is high time you were giving some thought to this subject, for the issue will follow close uppon the heels of financial reform.

My friends, whatever may be said to the contrary, the farmers have the welfare, and hence the responsibility, of the country in their hands. It is for you to judge how best to secure it. But be assured your path lies parallel with the labor interest of the country, and the laborer who owns nothing but his muscle and undeveloped brain, demands your tender regard and kindest consideration.

Goldsmith wrote, years ago, that—

> "Princes and Lords may flourish and fade,
> A breath can make them as a breath hath made;
> But a bold peasantry, a country's pride,
> When once destroyed, can never be supplied."

And the sentiment is as true to-day and just as pertinent to our case, as to theirs for whom he wrote.

The price of the bushel of wheat, the pound of pork, the pound of wool, butter or cheese, is of immediate importance to you; the difference of a few cents on either, makes millions in the aggregate; but of ten-fold more importance to you is it, that there should be no drones in our hive, and no lack of flowers for the working-bees to gather honey from.

The most dangerous element to society, is the poor with empty stomachs; the most unfortunate situation for the country to be in is, when trade lies dormant, when the forge is hushed, when the plow is resting in the furrow, and the mill is silent as the tomb.

The poor only earn as they labor—they eat only as they earn—the consumption of charity is meagre indeed. The rich drones, the non-producers, may leave us, take such of their wealth as they can scrape together and depart for other lands. A moment, as it were, in the flight of time, would regain the wealth, could we but retain and employ the strong arms and willing hands of labor.

The following, from Gerald Masey, strikes me with such force just here that I cannot refrain from giving it to you:

> "Train up thy children, England,
> In the ways of righteousness—and feed them
> With the bread of wholesome doctrine.
> Where hast thou mines—but in their industry?

Digitized by Google

Thy bulwarks, where—but in their breasts? Thy might
But in their arms?
Shall not their numbers therefore be thy wealth?
Thy strength, thy power, thy safety, and thy pride?
O grief, then—grief and shame.
If in this flourishing land there should be dwellings,
Where the new-born babe doth bring into its parent's soul
No joy! where squalid poverty receives it at its birth
And on her withered knees
Gives it the scanty bread of discontent."

My friends, does not this appeal thrill every fibre of your hearts, and move into living action every good impulse of your nature? Is it not a cause for "grief and shame," that here in this land of plenty, this land that God has endowed us with, and which he makes so fruitful—should be of all lands at this time, the one that feeds its labor on "the scanty bread of discontent?" And which is, most surely is, more the effect of our conduct, than of all others; more the outcome of our political inactivity and inertness, than of all other causes, potent as many of them might have been for evil.

Ponder, here again, my friends, and remember, *you* cannot escape the deep damnation that comes of bad government; knee-deep in the soil, you cannot escape the effects of your own neglected duty; you cannot escape the scourge that civil strife brings with it—and which must come if you do not rise to the demands of this occasion—or can you hide your property from the plunderers that follow in its train; when it ends, you cannot avoid the grasp of the tax-gatherer, or cover your possessions from the argus-eyed assessor, or in any way help bearing the giant share of the increased burden.

Your mistakes are your own, but for your error your children will pay a heavy penalty.

On you, more than any other, devolves the duty of driving the money-changers from our temple; the duty of cleaning out the augean stables of political corruption; the duty of putting a check upon the power of concentrated wealth, the sole producer of that corruption. You hold the balance of power, and should dare to use it. You hold in your hands weapons that fall upon political transgressors as lightly as snow-flakes, but with the power and destructive force of forked lightning from the hands of an offended God.

Digitized by Google

Gentlemen, brother farmers, I thank you for the patient hearing you have given me. I know I have not sufficient power of oratory to make the subject interesting outside itself, or command of rhetoric to give point to my ideas; but of plain, direct, and truthful language, I have enough, and more than that, I have dared to use it. I pray that you will each and all of you receive what I have said, with the same tenderness of heart and warmth of affection, that have instigated its utterance. Possibly my directness of speech has, in your opinions, bordered on an undue severity; it may be so, but words cannot express my desire for the full development of your strength. If I have cut deep, I have only been like the surgeon, who makes the incision deep, because the disease is deep-seated.

I am not a stranger to the many deceptions to which the farmer has been a victim. I am not forgetful of the doubt, fear, distrust, and extreme caution that have been engendered thereby. But we must accept the situation as it is, and to make the most of it we must take some risks; to use a homely and somewhat trite saying —it is useless to cry over spilt milk. Sitting still and growling will not produce results in any way helpful to our progress. The representative dog in the manger cannot grow fat. To act intelligently as becomes representatives of the great basic interest of the country, seeking to guard the rights of all other interests, to gird on our armor, to stand shoulder to shoulder, and be ready for the great battle before us, is the duty that attends us to-day. If I have said anything to stimulate and move you to a proper attention to that duty, I shall be content.

The president appointed the following committee on resolutions: E. H. Benton, of Dodge; J. W. Wood, of Sauk, John Carswell, of Richland; Mr. Adams, of Dane, and Wm. Orledge, of Kenosha.

Mr. BENTON: The gentleman last upon the floor has alluded to the contingency with reference to the conflict of interests which I hoped would not be alluded to in such an article. It has been alluded to upon the floor of Congress and in the papers of Chicago, yet it seems to me that such a contingency should never hold a place in the mind of an American citizen—that of bloody revolution. The framework of our government precludes such a con-

Digitized by Google

tingency. It was one of the blessings conferred upon us by the ballot, a silent yet efficient method of settling difficulties. Though silent, yet as potent as the lightning from heaven. So should we banish from our minds, if we entertain such ideas, that that contingency will ever arise. It certainly could not arise if every one of us discharge our duties as men. It is one of those contingencies that we hoped had passed away with the barbarisms of the past. We trust and hope that the contingency alluded to cannot arise, let us say shall not arise. Do not let passion, or party prejudice, or party feeling enter into the discussion of any question brought before us. Certainly, of all classes we are the ones to depricate the result of such a contingency as alluded to. The desolations of war, and after taxation fall upon the farming class heaviest, and herein in my mind arises the deep interest of the farming community in those subjects we term political. That word political is all right. He deprecated the word "political," and yet his is the only paper that has got the word "political" attached to the subject. Politics, brother farmers is our highest aim; to be well skilled and versed in every rule and duty in the life of a republic, is political, and should be be treated as our aim. We should banish from our minds forever the idea, or the possibility even, that a revolution of force would ever rise in the United States. Let us decide in our conduct as men, and as peaceable citizens of the United States, these questions that arise, with the fraternal spirit of brotherhood, and settle these questions by ballot.

Mr. ORLEDGE: I presume that all brother Benton has said is in my paper, because he is such an acute observer, and better able to judge of the language. I will take it for granted that it is there. I said we should not discuss party politics, or take party positions here, or strive to divide ourselves by party lines; but I know of no question we should not discuss; and with regard to looking forward to a bloody revolution, I do not think there is anybody who looks on it with more horror than I do. But there are a great many men who are in danger, because they will not open their eyes. I think this danger is coming faster than my brother has any idea. If he was in communication with parties in the coal-fields of Pennsylvania, as I am, he would find that deep-seated feeling is growing deeper and deeper all the time in their breasts. If he was acquainted with the ten thousand men in Chicago, that

Digitized by Google

are ready at almost any time to rise, if they had a leader, I think he would see that it was necessary to use strong language to show you the necessity of acting for your country, for yourselves, and for your cause.

Mr. HARRIS: I would like to make a suggestion: "The prudent man forseeth the evil and avoideth the danger, but the wicked goeth on and is punished." We have assembled here to-day to discuss what will promote our welfare individually, and produce the greatest good to the greatest number. Let us gain a little wisdom by the experience of the past. We went on about our farming, about our merchandizing, about our manufacturing, and the slave-power got hold of this land, and when the people finally solved the question it resisted, and we had to appeal from the ballot to the bullet. Before the money-power, or any other power, have fixed their clutches upon the labor of this land, let us say, we can have no more bloodshed, but make use of that peaceful revolution that our fathers ordained in the very institutions which they founded for us, and let us consider the advice of the great father of his country. The said political ideas have to be carried out by political organizations, but never forget and put your party before your country. It seems to me that the great American people, the great laborers, have allowed other men to manufacture public sentiment for them. They have asked, who wants position? I know that is the case. We want to look around and find what man represents our sentiments and we must say to him you must go and make laws for the people, conferring the greatest good upon the greatest number. If we attend to our business in these conventions, to counsel what is the greatest good to the greatest number, we need have no fear of a revolution of blood. Being all peacefully inclined, do not let us forget those duties the constitution has put upon us, if we want to enjoy the privilege of an American citizen.

Mr. Benton asked leave to make a personal explanation. The gentleman who read the paper alluded, to the feeling in the coal and iron regions of Pennsylvania. I know something about that feeling, but no class of citizens, holding the elective franchise, should ever entertain the idea of bloody revolution. To do a wrong does not make a right.

Secretary FIELD: I like to see the time all occupied, and I will say a single word. One thought suggested itself to me as Mr

Digitized by Google

Orledge was reading his paper, and that is, in our primary conventions and others for the nominations of officers, I think the general practice has obtained, throughout the entire country, that it is not the men that we believe will best represent us, who are nominated, but whom can we elect. Party ties are so strong that we will go party though sometimes wrong, and when men meet in convention to consult as to their true interests, they should say, such a man understands what certain class interests desire. If he understands what certain interests are and what is best for their particular interests, and he is a fair man in regard to all other interests, then he is the proper man to select and elect to represent those interests. I do not believe in class-legislation of any kind. Legislators should be men of sufficiently broad views to represent all interests fairly and honestly, but I will tell you, that we too often in conventions simply ask, who is the man we can elect in our party, and I have heard men say, and heard it this last fall in my own district, "I don't care whom we nominate if we can elect him. We will manage him when we get him there." Now, that is not the class of men who ought to be nominated; it is not the class of men we ought to elect. A man should be nominated and elected to any representative position because of his fitness for that place, and only that, and if these conventions shall bring the farmers and manufacturers and those representing the various industrial interests to see what their true interests are in politics, as well as upon all other subjects, it will be a vast advantage to those industrial interests and to the country.

Mr. CARSWELL: We can never tell what a man will do before we try him. We never have been able to find out what one of our representatives has done after he got through. Now, the farmers come here and talk about it, and here, on the 22d, is to be a convention to elect delegates to decide who the next president is to be. Pope says, "Where ignorance is bliss, 'tis folly to be wise," and I have certainly come to that conclusion; and I have said of politics for the last forty years, the less a person knows about it, the sweeter he sleeps. They nominate a candidate, and tell you that he is for the support of the railroad laws, that he never held any railroad stocks, but as soon as he sits down under the corrupt influence around the capitol, then they repeal those laws. When you can guarantee that man is infallible, and is not susceptible to any out-

Digitized by Google

side influence that can be brought to bear, and that he has no aspirations for any higher position you can offer him, then it will be all right.

Mr. EATON: It seems to me that sleep is not the only object of agriculture. I wish to say that the meetings which we enjoy here from year to year, and the efforts which we are making (a few of us) to elevate the standard of political agriculture, as well as agriculture in common, are evidences of progress. And the fact that while we choose a man to represent us in an official capacity, who does slightly disturb our slumbers, is an evidence that there is an element to work in the body politic; that is at some time not far distant, to renovate the society of this republic, and I often feel like thanking God and taking courage, and every time my desires are defeated, my candidate is beaten, or he has been overhauled after he has been elected, I feel a renewed determination to redouble my diligence, and be freed, to some extent at least, from party turmoils, and vote for the man in the future and not for party alone.

Mr. PHILLIPS: I wish to say just one word. I have watched this discussion with some interest. As I said here in the horticultural meeting, we have a very eccentric individual in our town; a farmer, who has been collecting statistics for the last two years. He can show you, beyond a doubt, that the farmers who have taken the least pains to inform themselves; that have taken the fewest newspapers or periodicals; that know the least about politics, and what is going on in the country, have been the most successful financially. I always disputed him, but he has got the figures to show it They have been talking about this same question ever since I can remember. I have meddled but little with politics myself. As a gentleman on the floor here said, in our primary meetings where these things all start, they do not say who is the best man, but who wants to go? And farmers go right there into the log schoolhouses and sit down and talk together, when there is not a lawyer. or merchant present, and say who is the strongest man we have got in the party? Just as long as this thing continues you can't stop it. They talked the matter over last fall. This man, they said, is a farmer; he is a good farmer; he hunts Sundays and the religious people would not want to support him. There was another man; and on looking the matter over this better man was not a granger. In order to get the granger strength, the party strength,

Digitized by Google

the farmers, we must nominate this other man. I begin to think with Mr. Carswell, the less we know, the less we have to do with politics, the better off we are. I do not say this should be so, but as long as these things continue it will be so.

Mr. ORLEDGE: I think that the gentleman has told some truth. I think that the man who gives his mind to the study of politics, so as to bring the question intelligently before the people, cannot attend to his business. I know very well, that I have done myself an injury pecuniarily by giving my thought to these questions; but, Mr. President and brother farmers, I cannot tell you from whence it comes, but there is a power behind me that is stronger than myself. I cannot keep still. My brain is busy thinking and my thoughts must find utterance. I cannot hope it. If I go down under it, I shall go down with a perfect consciousness of having been working, as I understand it, for God and humanity. Whether you will sustain me in it; whether my class and the people of the State will sustain me, is another question; but I know this, that God will sustain me in it, and when we meet on the other shore, I shall have due credit for all I have done. Let me say this, that however much you may line your pockets with greenbacks or gold, by staying at home and rooting, hog-like in the earth, caring nothing for your brother men, you will find that the more you dig there, and the more you root there, the closer will the capitalists put your nose to the grindstone, and the sharper he will turn it. This is no foolish question for you. It is no nonsensical idea that you are not—because you are farmers and cannot pile your dollars by the tens of thousands like the railroad-men, and the bankers—just as deeply interested as they, but as it is the simple fact that however much taxes they must pay, however much interest they must pay to others, the whole of it comes out of your muscle, your blood, and your bones, and the men who are with you in digging the gold out of the soil.

Do not give up everything to the study of politics, but study enough to know your duty, and try to be brave enough to do it.

On motion, the convention adjourned to 2 o'clock p. m.

Digitized by Google

*AFTERNOON SESSION.*

Joint meeting of the Academy of Arts and Sciences, and the Agricultural Convention were called to order by Dr. J. W. Hoyt, president of the academy, for the purpose of listening to the currency papers of E. H. Benton, Dr. Geo. M. Steele, and Mr. Leland.

## OUR AGRICULTURAL "RAG-BABY."

BY E. H. BENTON, LE ROY.

*Objects alike.*—Both the "specie resumptionist" and the greenback-men, seek to bring the currency of the country to par with gold; but their methods are dissimilar, and when the end is reached the effects will be very divergent; one will be stable and constant, the other unstable and fluctuating.

*Common observations.*—It is often observed, that it is unwise and inexpedient to find fault or to tear down, unless you can show a better way, or build better, and demonstrate usefulness by actual use.

*Plan of proceeding.*—Therefore, after showing that a "gold-basis currency" is essentially vicious, both in its structure and working, and that it has always been used as an agency to plunder labor, and at times to strangle production, we will discuss and unfold the beneficent workings of our agricultural "rag-baby," or the "new monetary system."

*The principles of the new system proven sound.*—While we call our system of currency "new," yet in fact every essential feature of it has been demonstrated as practicable and sound by experience at various times and under various circumstances, so that the structure we propose to erect, from foundation to cap-stone, has had all its material thoroughly tested.

*Advocated by bullionists.*—Again, some of the straitest of the sect of bullionists have at various times advocated precisely the same principles as inherent in any sound currency, whether of coin or coin and paper, *i. e.* convertability, elasticity, etc.

*A difference between being "at par" and a gold base.*—Let it be observed that there is a broad distinction between currency having a "gold basis" and being at "par with gold." A correct currency is never below par. While we seldom see a "gold-basis" currency at par, a complete legal-tender currency is never below par, and often is at a

Digitized by Google

premium; for instance, the bank-account at the Bank of Venice, the Bank-of-England note, and the first issue of greenbacks, until their interconvertible power was repealed by Congress, they, and the currency 5-20 bond, into which they were convertible at the option of the holder, being at 102 in less than five months after their issue.

That we may better see the radical difference existing in the "old" and "new" monetary system, we will briefly enunciate certain vital principles in finance and a sound circulating medium, or a sound monetary system.

*First principle.*—The coinage of money and emission of bills of credit or currency to circulate as money, is an act of sovereignty, and may not be divided or delegated without mischief and loss to the people. Says the Hon. Amasa Walker, in the International Review, 1874, pp. 225, 226, "no single error in regard to monetary affairs is more potent for evil than that which confounds banking with the manufacture and issue of a paper circulation. In popular estimation these are commonly regarded as identical, or at least as properly and necessarily united in the same institution. In truth, however, such a connection is neither necessary or proper. Banking, in its legitimate and proper uses, is the business of establishing a fund for loan, receiving deposits, negotiating bills of exchange, making collections, paying checks, etc.; and as these operations involve much hazard, the policy of uniting with them the issues of promises to pay money, which are themselves to be used for currency of the country, is in the highest degree objectionable."

*Second principle.*—The amount of the circulating medium should not be fixed by arbitrary legislation, but by the laws of trade; or in other terms, the convenience of the people. Our present currency, in amount, is wholly an arbitrary one. Its quantity is fixed by the government or limited by law.

*Third principle.*—Its value should be inherent; it should have no "basis" other than itself; this quality will leave it subject, like other commodities, to the laws of trade, which will give and secure the only and true value, and give it—

*Fourth principle.*—Elasticity; and we then have money which answereth all things, or a perfect "circulating medium."

*Fifth principle.*—The value of money consists in its power to increase or to draw interest, to exchange for all other commodities

Digitized by Google

and to pay all dues, private and public, and it is to be observed that this is a legal power or value, and not intrinsic in the material on which this power is conferred, and any limitation of this universal power, is so much depreciation in advance.

*Sixth principle.*—Any other money than that which is universal and unlimited in its uses and powers, and in all its attributes adapted to these purposes, will cause derangement in business and keep financial transactions uncertain and abnormal.

*Essential limits to circulation.*—The emission of money being an act of soverignty, its use will be limited to the autonony of the issuing power, and no further, unless by express treaty stipulations. We see a move already on foot to make the unit of currency the same in the United States and Great Britain, and it is as certain as any future event can be, that the time is not far distant when all the nations of the earth holding commercial relations will have a monetary unit, and also a unit of all measure.

*Money a creature of law.*—Now, if this indicates anything, it puts beyond questioning the proposition we have previously laid down, namely, that the money power of a circulating medium is a creature of law, a power created by statute; co-incident with and co-extensive with the authority of the issuing power and no further.

*The proper material for a circulating medium.*—Hence, the legal power to discharge all indebtedness and exchange for all commodities should be conferred in such a commodity as is universally accessible to all, and to the procurement of which there can be no possible limit. What has been the history of a coin basis currency but a succession of panics, failures, and suspensions; periodical inflation and contraction, over-issue and repudiation, wild speculation and as wide spread bankruptcy, and the worst feature of the case is, that these pernicious results are unavoidable with a mixed coin-basis currency.

*A pure coin currency preferred to a mixed one*—With a pure coin currency many of these disastrous consequences would be avoided; the cause of them would not inhere in the nature of the circulating medium, provided its production, coinage and distribution were left entirely under the control of the laws of trade, or supply and demand.

*General statement of objections to a coin currency.*—But there are certain conditions precedent to a sound and perfect currency or cir-

Digitized by Google

culating medium, which do not inhere in the precious metals, and the lack of which makes them vitally objectionable in the present condition of trade and civilization, and the objection to them will be still more marked as these conditions advance or increase in the future. We enumerate a few:

1. Their weight.
2. Their limited quantity.
3. The limited area in which they are procurable.
4. Their enormous cost in labor to procure, transport, and coin.
5. The rapidity with which they become deteriorated in value by use, it having been ascertained that in the use of about $33,000,000 of gold and $16,000,000 of silver in one year, there is an actual loss by friction of $100,000.

There are several minor objections, such as

1st. In convenience in carrying about.

2d. The ease with which their presence is ascertained, rendering it unsafe to carry on account of robbery.

3d. The difficulty of detecting counterfeit coins, loss of weight, and other means of reducing their value.

4th. The different coinages being of different actual values, the standard of alloys being different at different times.

*Greatest objection.*—Finally, the most vital objection and the one before which all that we have enumerated pale into insignificance is that a coined metallic currency has combined in its nature two entirely distinct powers, an inherent or intrinsic value in the material arising from its natural properties, and a purely legal value, conferred by statute in the coinage.

This combination of powers or qualities so utterly dissimilar in their nature gives rise to a great confusion of ideas in the common mind concerning money and the laws governing its uses, distribution, etc. This use of a commodity, so limited in its quantity and natural distribution, creates a privileged class, namely, the owners or owner of the gold mines of the country, for with the great advance in individual wealth, it is not an unlikely event that one man may yet have control of all the mines on the Pacific Slope, and thus put a whole nation under tribute; but aside from the imminent danger of such an event, the fact still remains, that a law giving the few owners of the gold and silver mines an absolute monopoly against which there can be no remedy, is just so far cre-

Digitized by Google

ating a privileged class, thereby working injustice and violating the fundamental principles of a republican government.

That the monetary power of coin is entirely different and separate from its intrinsic value is readily seen from the fact that the offer of a gold watch-chain worth ten dollars, in payment of a debt of ten dollars would be no more a legal discharge of the indebtedness than a tender of ten bushels of wheat, or any other commodity valued at ten dollars in the market.

These considerations being wholly sufficient to condemn the use of so utterly an inappropriate material as the so-called precious metals for the circulating medium of a civilized people, however fit it may be for savages and barbarous nations—we will pass to the consideration of the desirability of a *mixed* currency, or a specie basis for paper currency. It is an axiom in finance that on a specie basis every dollar of paper issue put in circulation, crowds out just so much specie, making it a truly "mixed currency."

Perhaps the most vital objection to a specie basis, is the fact that it is only in *name*, but seldom in *fact*, that it has existed. If it were really in existence it would lose many of its objectionable features; but seeing it has seldom existed, it being almost a moral impossibility, we propose to unmask the hideous deformity, by a few simple facts, easily obtained from published reports and other reliable sources.

What, then, is this reputed "gold basis" in actuality? Sir John Lubbock, of the banking-house of Roberts & Co., of London, analyzed the receipts of that house, and found them to be in each $100.

| | |
|---|---|
| Gold and silver | $0 50 |
| Bank bills | 2 50 |
| Checks and other forms of discount | 97 00 |
| Total | 100 00 |

A basis of 3 per cent.; a superstructure of 97 per cent. A previous estimate, made by Professor Bonamy Price, put the inflation of 30 to 1, and this is further substantiated by Henry Carey Baird, of Philadelphia, who demonstrated the total currency of Great Britain to be $5,300,000,000, which would give as the amount of coin in bank on which this superstructure of credit is based $25,500,000.

The exceeding frailty of a coin basis is aptly illustrated by two

Digitized by Google

transactions which have occurred between our government and Great Britain. The first was when our bonds had been sold in London, and the proceeds to the extent of $21,000,000 had accumulated in the Bank of England, that institution gave notice to the officials of the Treasury Department of the United States, that their whole power would be used against us if it was demanded in coin, and demanded that the coin should not be removed, but that the whole amount should be reinvested in our bonds, as they should be offered in the markets of London. So, also, when the claim for the $15,500,000 awarded us at Geneva was maturing, the banking and commercial classes of Great Britain induced the government to interpose, and by diplomatic arrangements through the State Department here, operating upon the Treasury Department, secured the transfer of securities, and thus avoided the transfer of coin. The withdrawal of either of these sums in bullion would have produced not only a pertubation throughout British and continental markets, but a panic that would probably have caused the Bank of England to suspend specie payments.

But there is a more recent illustration. When Germany received her indemnity in gold from France, she was too wise to take it home, but invested some $20,000,000 in United States bonds and cunningly deposited about as much more in the Bank of England and elsewhere, and when there was an intimation given out of a "call" for this deposit, being meditated by Germany, it caused a rise of 1 per cent. in the rate of interest by the bank. Crafty Bismarck has the British Lion virtually by the throat, by thus confiding a few millions of gold to the care of the British banks.

But, returning to our country, a few cases will be given to illustrate what a specie basis actually is in operation. Extract from "Our National Currency," by Amasa Walker, International Review, page 214–216. "The proportion of specie to circulation and deposits in 1860, was

| | |
|---|---|
| In Louisiana | 38.6 per cent |
| In Indiana | 22.2 per cent |
| In New York | 15.6 per cent. |
| In Connecticut | 7.5 per cent. |
| In Vermont | 4.2 per cent. |
| In Illinois | 2.3 per cent. |

Average in the United States was 19.1 per cent.



Digitized by Google

There was no legal restraint on the banks as to number, and in only two States, Massachusetts and Louisiana, was there any restraint on the issue or any definite proportion fixed by law between the gold in their vaults, and the bills emitted. What was the condition of our national banks in 1873? By the report of the comptroller of the currency, September 12, we see the following, (page 220:)

Immediate liabilities of 1,976 national banks:

| | |
|---|---|
| Circulation | $339,081,799 |
| Deposits of all kinds | 638,612,451 |
| Total | 1,077,694 250 |

They held at the same time:

| | |
|---|---|
| Legal-tenders | $92,347,663 |
| Specie | 19,868,469 |
| United States certificate of deposits | 20,610,000 |
| Total | 132,826,132 |

Equal to 13.6 per cent. of immediate liabilities. In addition to this reserve, the banks had—

| | |
|---|---|
| Due from redeeming agents | $93,584,000 |
| Clearing-house certificates | 175,000 |

Equal to 9.7 per cent., making the total reserve 23.3 per cent.

This was the condition of the national banks one week prior to their general suspension.

To sum up, there never existed a bank which issued its bills for circulation and received deposits and made loans, but what has suspended, or done worse, if it had any occasion to. They are only a source of danger, and always fail just when they ought to stand.

We have previously asserted that the whole system of the emission of a circulating medium by banking institutions was essentially vicious, and the evil is greatly aggravated when the emission is largely inflation, sometimes all inflation, not a pretence of a basis; as instance, the "wild-cat banking" in our western States a few years since. When you add to the always-liable-to-suspend condition, of an issuance of four times the amount of bills of credit to circulate as currency, of the coin in their vaults, (and this is the

Digitized by Google

very highest average of "basis" ever known in this country,) the additional explosive element of deposits, most of which are loaned on interest on specific time; it does not seem possible for human ingenuity to contrive a more pernicious, unsafe system for a basis for all monetary transactions of a country.

We know of no reason in the world for it except this, that the banks always profit by it and the general public suffer.

Now, for one of the "general public," I protest against the continued legalization of this system of wholesale robbery of the masses, and the enriching of a few by legal enactment. No government has a right to create such a privileged class at the expense of all others, and especially is this odious in a republic. Of all monopolies, this is the most gigantic and outrageous, and should be speedily abrogated.

We distinctly assert that banking in its legitimate sphere is a private matter, no more needing governmental control or regulation than ordinary mercantile transactions, and should be left entirely to the needs of business to determine how many there shall be and where they shall be.

We declare for a total severance of the functions of banking from the wholly distinct and govermental function of creating and emitting the circulating medium of the country. We want a financial republic as well as a political republic, and the first step in that direction is to make a declaration of independence from a coin currency or a coin-basis currency, both of which are but engines of mischief to all the productive agencies of the land. Seeing that they are inherently incapable of improvement or of amendment, and that they are the effete relics of semi-civilization, we would give them the benefits of the same cremation act which they through the Secretary of the Treasury are giving to our greenbacks.

Not being disposed to fall down and worship the golden image which the heathen have set up to worship, and commanded all men to fall before, we propose to leave them to their dumb-idol worship and proceed to the more pleasant task of enumerating the beneficent workings of our new monetary system.

The characteristics of the perfect currency to be issued under the new monetary system are briefly these: Whether gold or currency, to be coined and made and issued solely and entirely by the government. No legal relation to be created between coin money and

Digitized by Google

currency money. No distinction in any kind or degree in legal-tender power, or exchange power. No legislative act fixing an arbitrary or artificial limit to the amount to be used by the people of either kind of money, that being left to the laws of trade, or the needs of the public.

Each kind of money shall have equal privilege of being converted into any bond of the United States, bearing interest not to exceed 3.65 per cent., and the government shall at all times buy such bonds when offered and shall pay at its option either kind of money, coin or currency.

Each description of money shall be emitted in such denominations as the convenience of the public may require.

The government shall make all the bonds necessary to meet the demands of this requirement, with interest payable in either coin or currency at its option, semi-annually, and such bonds shall be in denominations suitable to meet the need of the public, from ten dollars and upward.

The government shall emit such currency by paying it out for all its expenses, (except where gold is required by the express terms of the bond,) and by paying off as fast as possible and consistent with the public credit, all its matured bonds or other forms of indebtedness, at the same time retiring and destroying all other forms of currency as rapidly as possible and consistent with the public good.

The impress, or advertisement, on both kinds of money shall be the same identically, and the unit of denomination the same; and neither shall ever be made redeemable in the other.

Any bonds issued by the government in pursuance of the foregoing requirements, in other ownership than the government, may be subject to any form of taxation to which other taxable property or moneys is subject, not to exceed per annum the maximum of one-half of one per centum, aggregate.

We now enquire into the practical working of a monetary system embodying in substance the foregoing propositions.

It is evident from the very outset that no suspension or panic could possibly occur under such a system, there being no credit or base to be impaired or to prove baseless; seeing that both kinds of the circulating medium or money is *the money itself*, and not a representative of it, or a promise of it.

Digitized by Google

So, also, neither could be inflated, as each contains a like value as currency or money, and that value is inherent. As a necessary deduction from this brief outline, under the beneficent workings of our "rag-baby," the whole array of panics, suspensions, repudiations, inflations, monetary crises, etc., *id genus omne*, would be among the things that were.

It would effect a large reduction of the principal of the public debt, by giving the government means to pay off a large portion of its matured bonds, and funding a large portion in a bond drawing about one-half the present rate of interest.

Perhaps the greatest benefit to accrue to the industry and material interests of our country, which would arise from this system of finance, would be the final removal from the halls of Congress and party politics, the whole matter of sustaining the public credit, of raising a revenue to pay our interest on bonds and the maturing indebtedness, and indeed, make a complete end of legislation concerning banks and banking, as they would cease to need any; they being relegated to their proper sphere, that of private or individual action; and the "resumption of specie payments" might very properly be ranked among the "lost arts," and all the fuss and bother now exercised over this *pons asinorum* of the "specie basis" doctors, be directed to the settlement of the "Cuban question."

The adoption of such a system of finance might virtually be called, "an act for the resumption of business," as it would give immediate stability to all values, and therefore permanence to all mercantile transactions, it being as truly "elastic" as the laws of trade; truly automatic; ebbing and flowing with the volume of business; not artificially or arbitrarily, as when fixed in amount by legal provisions.

But we stated at the outset that the material of which we proposed to erect our structure had all been tested in actual use, not exactly in the same form as in the "American monetary system," which we propose to inaugurate, but mostly fragmentary, in connection with a "gold- or coin-basis" currency. As the monetary structure of Great Britain is so often referred to as a sample of wisdom and stability, we will first look there for precedents, although on general principles we do not rely on "precedents" so much as on common-sense and sound logic.

The English consol is simply the English debt funded in a 3 per

Digitized by Google

cent. irredeemable bond, in the form of a perpetual life-annuity, and has never been below par, and never will be; and yet, when a citizen of the United States makes a similar proposition to fund their debt in an irredeemable currency and a 3.65 interest-bearing bond, all the bullionist organs in the country set up a constant howl of "repudiation."

So, also, much has been said about the "unconstitutionality" of the "legal-tender act," and yet the Bank-of-England note has all the powers and prerogatives of a legal tender in all commercial transactions.

See the case of France in the late war with Germany. "Their nation was in an incomparably worse position than we ever were; beaten in battle, and forced to pay the costs of the war on both sides, the enemy retaining their territory as collateral until it was so paid, and their chief city, with a population double that of the largest city of our republic, in the hands of insurgents. Their government immediately filled the nation with full legal-tender currency, multiplying several times the former volume of currency, which enabled them to perform that wonder of modern financiering—to pay both her foreign and domestic debt, and return to specie payment without the least symptom of a crisis or repudiation."

But we have the most valuable illustrations from our own experience during the late civil war. February 25, 1862, Congress passed, and the president signed a bill, "an act to authorize the issue of United States notes, for the redemption and funding thereof, and for funding the floating debt of the United States." Now, what resulted? Gold instantly lost two-thirds of its premium, and in less than four months from the time of the passage of the bill twenty-year gold bearing United States six per cent. bonds advanced in gold from 90 cents to $1.02.

On the 7th of June following, another bill, similar to this, was passed, authorizing the issue of $150,000,000 more, $35,000,000 of which was to be in denominations of less than $5, or fractional currency as it is called.

Of the results flowing to the laboring classes, and indeed to all classes, from this issue of legal-tender currency, we will quote briefly from Henry C. Carey. "At once the scene was changed, the employer being now enabled to pay cash for all the service and all the materials of which he stood in need; and the workman in like

Digitized by Google

manner enabled to pay in cash for the food and clothing required by his family and himself.

"The farmer, now selling his crops for live money, was thus enabled to place the store-keeper in a position to buy for cash in the distant cities. Almost at once, and as if by magic, the usurious charges disappeared, thereby lightening the burdens of workingmen, farmers, mechanics, and laborers, to an annual extent thrice exceeding the amount of greenbacks issued. Of all financial measures on record, there has been none, which has so much tended toward elevation of the laborer, and toward establishing harmony in the relations of labor and capital, as has been the case with that by which $400,000,000 of live money, free of interest, were made to take the place of thousands of millions of dead money, for whose use our people had been paying interest at twice, thrice, and even twenty times the legal rates."

Seeing, then, that the system we propose to set up has worked so well and so safely in detached, fragmentary forms, what hinders it being immediately set at work?

There are several reasons:

1. Party interests.
2. Misrepresentation by the bulk of the press.
3. Prejudice arising from ignorance and misunderstanding.
4. It is considered altogether new by many, and, therefore, opposed on the general ground of conservatism.
5. The banking interest.
6. The bullionists, who hold that gold and silver were created for the express purpose of money use, and that nothing is money which has not as a commodity the full value fixed by coinage as its legal value.
7. The money-lenders and all money-brokers generally.

There may be other minor hindrances, but we will pass them by and consider how those above enumerated may be removed or overcome. The most powerful, because of the immense financial resources it commands, and the most persistent, because actuated by selfishness, which is perennial in the human breast, is the banking interest. It was this power which manipulated the finance committee in the Senate, and depreciated the greenback in advance, by curtailing its legal-tender power and finally repealed its convertibility power, and set up its rival, the national bank-note, which has

Digitized by Google

been petted in governmental circles ever since, and the greenback as persistently persecuted and curtailed.

This privileged class, to whom has virtually been committed the nation's purse and commercial life, by criminal and corrupt legislation, will not relinquish their hold without a life and death struggle. We propose to give them the benefits of judge and jury.

As both parties seem now fully under the leadership of specie-basis men, we propose to organize a new party, provided, nevertheless, that if either party will put in nomination men otherwise fit and capable, who are reliably in favor of a greenback currency, we will then vote with them, as we consider this question the most vital of any now in issue between the parties.

As to the misrepresentation, prejudice, and conservatism which bar our success, we propose to interpose a simple statement of facts, and ask of those who oppose us, from whatever reason, to meet us fairly on the straight issues involved, and we are willing to rest our cause on intelligence and sound financial experience and deduction.

Says the Hon. Amasa Walker, in International Review, pp. 254, 255, 1875, speaking of how the problem of the status of the currency should be reached and decided: "Questions like these, the American people must take into deliberate consideration, and decide by their ballots. It is for the voter to determine in what manner the subject shall be disposed of, for the average representative will do nothing knowingly, which his constituents do not demand or will not approve. Hence, if the enactment of a 'new monetary system' is wished for, public sentiment, clearly expressed, must indicate the time when, and the way in which the result is to be brought about. The will of the people must be made effective by the choice of those to legislate for them, whose views are known to be correct, and who can be relied upon to carry out the wishes of their constituents by appropriate action. Those who desire the restoration of the currency, must say when and how, in unmistakable terms. There are minor details, but the measures specified are those most essential. No successful evasion is possible. By no political legerdemain can the great isssues be permanently eluded, so vital are they to the prosperity of the nation. They will force themselves upon the country, before and above all others, until decided. And as this can only be done by Congress, the members of

Digitized by Google

that body must be chosen in reference to it. Hence, a great political struggle. This cannot be helped, nor ought to be regretted. What more desirable than that parties should be formed upon those issues, in which the public interests are most deeply involved? How indispensable that the people inform themselves in regard to questions that concern themselves so intimately! The more agitation, the more discussion, the sooner will the masses be likely to discover the true remedies for the ills they suffer."

---

## GOLD AS A STANDARD OF VALUE.

BY G. M. STEELE, D. D., PRESIDENT OF LAWRENCE UNIVERSITY.

In fixing a standard, it is essential to select something that is as nearly as possible invariable. The conventional unit of lineal measure must not be a line which averages a foot; though it may be fourteen inches to-day and nine inches to-morrow. The bushel-measure should not contain two or three quarts more or less at one time than at another. For the same reason it is desirable that the unit of value should have the same purchasing power next week that it has now.

But here we are met by a peculiarity in our unit of value measure. The measure itself is a commodity. The merchants scales, and weights, and yard-sticks are not for sale, but his dollars are; that is, the latter are not used for the sole purpose of measurement. Now, value is not a quality inherent in an article, it is a relative term signifying the amount of any one thing for which a given amount of another may be equitably exchanged. If there be but two things, the value of one being expressed in terms of the other, they cannot both lose or gain value at the same time, neither can one lose or gain while the other remains stationary any more than the two arms of the balance can both ascend or descend at the same time, or one go up while the other does not go down. If the value of the one is diminished the value of the other is increased in a correspondinding ratio and *vice versa*.

So with reference to the whole range of commodities in the community. There can be no general rise or fall of values. It is true

Digitized by Google

that the sum of values may be increased or diminished by the increase or diminution of things having value. But the value of no individual thing can be increased without a diminution of the value of something else. If the value of thirty, or fifty, or any other number of articles is increased, there must be a corresponding decrease in the value of some other article or articles. If the value of all other articles except one be diminished, the value of that one will be increased in a precisely corresponding ratio. It makes no difference what these commodities may be, whether cloth or leather, wheat or lumber.

Such being the general rule, the question arises, is gold any exception to it? Has gold, when used as money, a uniformity which no other commodity has, or which it has not when not used as money? Or does it follow the same natural law to which all other values are subject? Some of the ablest of our recent writers on political economy, and those, too, who are ardent supporters of a value currency and a gold basis, now concede that there is no such stability of value in gold. Among these I may mention Cairnes, Fawcett, and Jevons, all writers of acknowledged authority.

But this doctrine of the fluctuating value of gold is admitted practically by even those who deny it theoretically. The advocates of a metallic currency, hold that certain principles are firmly established; among others that any amount of gold and silver in existence, is sufficient to make the exchanges of the community and of the world; that if there be less at any one point, the value of all commodities will fall, and the value of money will rise, till the supply of the instrument of exchange will equalize the demand; if there be more, prices will rise till they absorb the surplus, and this by a natural law. They also explain that the doctrine may be stated in another way, viz., that gold always goes from where it is dear and scarce. Now, if gold be of uniform value, how can it be dear in one place and cheap in another, or how can it be cheaper or dearer in any place at one time than at another? If general prices have fallen and risen, then money, which is the correlative of commodities in the relation indicated by price, must have also correspondingly risen or fallen.

The theory of Professor Summer, and those who think with him, in relation to the regulation of prices on the basis of a gold currency, I take to be substantially as follows: If for any reason gold

Digitized by Google

is drawn away from the country, general values diminish; which is only another way of saying that the value of gold increases, according to the natural law of supply and demand.

It is true that the prices change, not merely, as these teachers intimate, in proportion to the decrease in the amount of gold, but far more than this, and for another reason; that is because of the derangement of business and the stoppage of industries consequent upon the scarcity of money. But, however this be, when the value of commodities decreased and the value of gold increases, then the latter flows back into the country. This causes prices to increase and the value of gold to decrease, until it has reached the extreme point of reaction, when the gold because of its two greatly diminished value goes abroad again, causing the diminution of prices with the usual hardships and disasters attending such an effect. This is what is meant by the amount of money regulating itself as it is said it always will do on a sound metallic basis. It is simply *regulation by revulsion*. If these writers are correct, fluctuations are inevitable in the nature of things, crises must occur, every period of prosperity must have its antithesis in a period of disaster. This has been the actual course of events in our commercial history and in that of Great Britain for the last fifty or sixty years, under the *regime* of a nominal specie basis. A commercial cycle is accomplished in about ten years, with something like intervening and and irregular epicycles.

The history of one of these periods is the history of all, and is familiar to us all. We begin with moderate prices, money scarce and dear, and wages low, but employment at some wages for most who are willing to work. Production is enlarged, commerce is more lively, prices rise, capital increases, money becomes plenty and cheap. Our expenditures become more profuse, we begin to run larger risks in business, importations exceed exportations; money begins to go abroad, and consequently to become scarce, a panic ensues, business is curtailed, the panic changes to a real revulsion, many industries stop, bankruptcy becomes the order of the day, all kinds of commodities fall to the lowest prices, till money rises so much in value that it becomes an article of import, and as it flows back, industry revives, slowly at first, and then more rapidly, and we start off again to repeat the same process.

Now, it will be observed, that there is implied in all this change,

Digitized by Google

and indeed in the language of the sturdiest bullionists who discuss the subjects. however they may manage to conceal it, even from themselves, this one thing, viz., that the value of gold follows the same law of supply and demand that the value of other commodities do—and that this value varies largely in different localities, and in the same locality at different times. Few doctrines are more fallacious than that of the stability of the value of gold, and few fallacies are more wide-spread and more mischevious. It comes from the habit prevalent even among the well-instructed and those who theoretically know better of practically confounding *price* with *value*. It will not be difficult to show that the *purchasing power of gold*—and this is what we mean by value—within the last six years, has varied by an imperceptible fraction less than that of our national paper currency even when the latter has been under unnecessary and unnatural disabilities.

Commissioner Wells, in his report of 1869, (page 52,) gives a tabular statement of the comparative prices of a list of eleven staple articles in the Philadelphia market on July 1, 1857, and July 30, 1869. The average decrease in the price of these eleven articles, reckoned in currency, is 30.9 per cent., or currency values had increased 45 per cent., while the decrease in the premium on gold for the same time was only 11 per cent. If the prices are reduced to a gold standard, and if we may take these articles or representative of general prices, as Mr. Wells obviously intends, we shall find that the value of gold in these two years varied 40 per cent. Take another example. Amasa Walker, in his work on the Science of Wealth, (page 488,) gives the comparative prices of a list of seventeen articles for the four successive years 1862 to 1866 inclusive, in the Boston market for the month of October. These articles, as he says, "are of domestic produce, not directly affected by custom or excise charges." Taking these as representative of general values, we learn that the advance in the whole four years amounts to 141 per cent., while the premium on gold in the same time has advanced only 11.5 per cent. Reducing everything to a gold standard we find that the value of gold had fallen nearly 53 per cent. in four years. In other words whatever you might have purchased for a gold dollar in 1862, you would have been obliged to pay $2.13 for the same article in 1865. By the same table we learn that from October 1864, to October, 1865, while the premium on gold fell 30 per cent., general prices rose

Digitized by Google

10.5 per cent. Reducing all the values to a gold standard, I find that gold fluctuated in a single year nearly 58 per cent., while the fluctuations in the value of greenbacks tested by the same standard of general prices, was only 9.5 per cent., or less than one sixth of that of gold!

A more reliable illustration is found in the banker's almanac for 1875. In it is found a tabular list of the comparative prices of seventy-five staple articles in the New York market on the first day of May for fourteen successive years, 1862 to 1874. From the information contained in this table and a table giving the monthly premium on gold during the same years, I have made some careful calculations, the results of which are embraced in the following table. It embraces in separate columns the rise and fall of the premiums on gold reckoned by the percentage on the premiums of each year,* rise and fall of currency prices, the same of gold prices, (or prices reduced to the gold standard,) the fluctuation of currency values, and the fluctuations in the value of gold. The figures for the last two years are taken from the New York Financial Review for 1876.

| Years. | Premium on gold. | Currency prices. | Gold prices. | Value of currency | Value of gold. |
|---|---|---|---|---|---|
| 1863–4 | r 20.00 | r 34.00 | r 28.00 | f 25.00 | f 22.00 |
| 1864–5 | f 40.58 | f 2.00 | f 14.70 | r 2.00 | r 17.60 |
| 1865–6 | f 9.15 | f 16.70 | f 14.00 | r 20.00 | r 17.00 |
| 1866–7 | f 3.50 | r 1.60 | f 0.09 | f 1.40 | r 1.00 |
| 1867–8 | r 7.50 | f 3.60 | f 2.10 | r 3.70 | r 2.10 |
| 1868–9 | f 1.25 | r 12.70 | r 11.00 | f 11.25 | f 9.87 |
| 1869–70 | f 63.00 | f 11.20 | r 5.60 | r 13.00 | f 4.75 |
| 1870–1 | f 20.50 | f 7.22 | f 8.58 | r 7.80 | r 9.27 |
| 1871–2 | r 14.00 | r 6.10 | r 8.68 | f 5.67 | f 8.00 |
| 1872–3 | r 33.00 | r 8.40 | r 4.00 | f 7.75 | f 3.75 |
| 1873–4 | f 23.50 | f 42.60 | f 40.80 | r 73.00 | r 69.00 |
| 1874–5 | r 21.20 | f 10.18 | f 11.85 | r 11.12 | r 12.12 |
| 1875–6 | r 4.40 | f 0.72 | f 1.15 | r 0.72 | r 1.16 |
| Average annual variat'n | 20.12 | 12.08 | 11.66 | 14.80 | 14.50 |

The figures indicate the per cent.; f, fall; r, rise.

* The percentage is not the numerical per cent. of the rise or fall but the percentage on the premiums at the time from which the reckoning starts. Thus, if the premium is 30 per cent. and then goes up to 40 per cent., the rise is not 10 per cent. but 33⅓ per cent.

Digitized by Google

From this table we learn several things: Among others, 1. That the fluctuation of prices in no respect corresponds with the variations in the premium on gold. 2. That the value of gold instead of a fixed and stable value is constantly fluctuating and that in the thirteen years it has varied all the way from 1 per cent. up to 69 per cent. in one year. 3. That in four out of the last six years the variation in the value of gold has been greater than in that of greenbacks. 4. That for the whole thirteen years, during which time the greenback has been subject to unnatural disabilities by the action to the government, its average variations in value has been not quite one-third of one per cent. greater than that of gold.

It may be said that these statistics pertain to an era full of disturbing elements and that, therefore, calculations made from them are unreliable. Let us then, examine certain facts belonging to a time free from these perturbations. I avail myself of another table and diagram prepared by Mr. Walker.*

He gives us a tabular list of the comparative prices of ten staple articles in the New York market for twenty-six years, 1834 to 1859 inclusive—the only period, he says, for which we have correct data, also a period of general peace. The articles selected are the most common in use, and those whose prices are best known, and least liable to fluctuations, except by change in the currency. The prices, it will be observed, are gold prices. If the articles here specified fairly represent the general values of the commodities of the country, the value of gold diminished in two years, 1834 to 1836, to more than 35 per cent. In the next six years, 1836 to 1842, its value increased 109 per cent. In the next five years it diminished again 33⅓ per cent., having had an advance in the meantime of 11 per cent. In the next three years the value of gold advanced nearly 30 per cent., and in the next seven years, with some fluctuations in the interval, it diminished 36½ per cent., with an increase the next year of 15⅓ per cent. Here, then, we have, in the space of twenty-four years, seven marked fluctuations, varying from 11 to 109 per cent., with some minor variations not noticed. Mr. Walker constructed these tables to show that the fluctuation in prices corresponds with the variations in the amount of circulation, and that the former are caused by the latter. He is not altogether successful in that which he attempts, and his tables are by no means

*_Science of Wealth_, by Amasa Walker, (larger edition,) pp. 177, 178, with diagram.

Digitized by Google

perfect. But, whatever the causes may be, if the tables show anything with reference to the variation of prices, they show that the value of gold is exceedingly unstable.

That this is not wholly owing to a redundant paper currency or to circumstances peculiar to our own country, is indicated by the testimony of Professor Jevons, who will certainly be regarded as a disinterested witness. In his recent work on "Money and the mechanism of exchange," he refers to a previous paper of his, on "Variation of Prices," read before the London Statistical Society, in 1865, in which he claims to have shown that the value of gold between 1789 and 1809, fell in the ratio of 100 to 54, or by 46 per cent. From 1809 to 1849, it rose again in the extraordinary ratio of 100 to 245, or by 143 per cent., rendering government annuities and all fixed payments extending over this period almost two and a half times as valuable as they were in 1809. I have not at hand any statistics showing the amount of money in circulation in Great Britain during these periods, but it will be safe to assume that there was a large increase on the whole. Thus indicating another serious fallacy in the reasonings of a leading school of British economists who teach that the value of money depreciates, or what is the same thing, that prices appreciate, in a ratio corresponding to the increase of the amount of money in circulation. Professor Jevons says, furthermore, that "since 1849 the value of gold has again fallen to the extent of at least 20 per cent; and a careful study of the fluctuations of prices, as shown either in the annual reviews of trade of the Economist newspaper, or in the paper referred to above, shows that fluctuations of from 10 to 25 per cent. occur in every credit cycle."

It may be said that such statistics are unsatisfactory, because only indicating the condition of things where a mixed currency is used. Let us, then, test the matter by an examination of the price-lists in California, where they have a purely metallic currency. I have not been able to secure such lists, extending over a series of many years, as I would desire to do, in order to establish the fact more clearly. But I chanced to find, the other day, in the San Francisco Journal of Commerce of January 12, 1876, a table of comparative prices of twenty-nine staple and representative commodities in the markets of that city. The table was prepared without any reference to the question now under discussion, and is, therefore,

Digitized by Google

the more reliable. By it we learn that between January, 1875, and January, 1876, general prices had fallen more than 26 per cent. or what is the same thing, the value of gold had risen more than 35 per cent. in a single year. Now, 35 per cent. is a greater fluctuation than has occurred in the value of greenbacks in any one year since 1863, with a single exception.

Another fact or two in the current commercial and industrial history of California may exemplify the effect of an exclusive gold currency as compared with one of reliable paper. Mr. Kelley in a recent speech introduced some statistics indicating very clearly that the progress of that State in wealth and population during the last decade was less in proportion to the favorableness of its conditions than that of any State not made the theatre of war during the rebellion. But this is not the chief point to which I wish to direct attention. I have with much care compiled a table of comparative wholesale prices of a list of nineteen staple articles of general use, as they were sold in the month of February of the present year, in the cities of San Francisco, Chicago, and New York. Instead of giving the prices of the commodities in the quantities in which they are usually sold, I have taken proportional amounts of each so as to bring the prices as nearly as practical into the neighborhood of $1 each, otherwise the difference of the price of one article in different places might unfairly affect the general average. Thus, if pork at $20 per barrel be put against cotton cloth at 7½ cents per yard, the proportions will not be as just as if we take one-twentieth of a barrel of pork and 14 yards of cloth.

Digitized by Google

*Table of comparative prices of staple commodities in the market of San Francisco, Chicago, and New York, February, 1876.*

| ARTICLES. | SAN FRANCISCO. | | CHICAGO. | | NEW YORK. | |
|---|---|---|---|---|---|---|
| | Price of ordinary quantity. | Proportional price. | Price of ordinary quantity. | Proportional price. | Price of ordinary quantity. | Proportional price. |
| Tea .....pound. | .59 | .59 | .68 | .68 | .68 | .68 |
| Oats.....bushel. | .7750 | .7750 | .32 | .32 | .45 | .45 |
| Potatoes.....do.. | .76 | 1.52 | .30 | .60 | .50 | 1.00 |
| Candles.....pound. | .13 | .91 | .16 | 1.12 | .24 | 1.68 |
| Coffee .....do.. | .22 | 1.10 | .22 | 1.10 | .22 | 1.10 |
| Butter.....do.. | .34 | 1.02 | .23 | .69 | .25 | .75 |
| Sugar .....do.. | .12 | 1.20 | .117½ | 1.1750 | .107½ | 1.0750 |
| Flour .....barrel | 5.77 | 1.1540 | 4.75 | .95 | 5.25 | 1.05 |
| Cheese.....pound. | .16 | 1.12 | .12 | .84 | .12 | .84 |
| Pig-iron.....ton. | 34.00 | 1.1330 | 28.00 | .9330 | 22.00 | .7330 |
| Eggs.....dozen. | .60 | 1.32 | .15 | .30 | .16 | .32 |
| Nails.....keg. | 3.70 | .9250 | 4.00 | .1.00 | 3.75 | .9620 |
| Hams .....pound. | .17 | 1.02 | .1150 | .69 | .14 | .84 |
| Beef.....barrel. | 10.00 | 1.00 | 9.50 | .95 | 12.00 | 1.20 |
| Pork..... ...do.. | 20.00 | 1.00 | 21.50 | 1.0750 | 20.00 | 1.00 |
| Pepper.....pound. | .15 | .90 | .20 | 1.20 | .18 | 1.08 |
| Cotton-cloth, And'gn, yd. | .1350 | .1450 | .1050 | .7350 | .1050 | .7350 |
| Prints.....do. | .0750 | 1.05 | .0750 | 1.05 | .0650 | .91 |
| Brown sheetings. ....do. | .12 | 1.08 | .0950 | .8550 | .0950 | .8550 |
| | ..... | 19.6420 | ..... | 16.2630 | ..... | 17.26 |

NOTE.—More than half of the above articles are among the exports from California.

It will be seen at once by the foregoing table that our government paper dollar has in NewYork nearly 14 per cent. more purchasing power than a gold dollar has in San Francisco, and that in Chicago it has over 20 per cent. more. This, too, when the gold dollar has 35 per cent. more purchasing power there now than it had one year ago.

It is now tolerably evident not only that gold has a very unstable and fluctuating value, rendering it unfit to be regarded as a standard of value, but that it is often more fluctuating and uncertain in its character than is our national paper currency at its worst estate. What I mean by its worst estate, is this: Our national currency,



Digitized by Google

though accomplishing marvels for the salvation of the country when threatened with destruction by insurrection and civil war, and for its industrial and commercial prosperity after the restoration of peace, has done this under exceedingly unfavorable auspices for its own credit. Destined from the first to depreciation and partial repudiation by the very government that issued it, and assaulted and maligned, first by political partizans, and then by the financial authorities whose venerable but false philosophy it threatened to undermine, and whose control over the wealth of the nation it was likely to reduce to its lowest terms, it has never had anything like a fair chance to prove its real excellence. Yet for all this it has, during considerable periods of time kept a steadier value than gold itself; during nearly the whole period of its existence its average annual fluctuation has not been perceptibly greater than that of gold; while to-day it has, where it is used, from 14 to 20 per cent. more purchasing power than that of gold has in a community where the latter is the exclusive currency.

---

## A CONSIDERATION OF THE INTERCONVERTIBLE-NOTE SCHEME.

BY E. B. LELAND, EAU CLAIRE.

The motto that this country should have a currency "as good as gold and plenty of it," is one of those generalities which must meet with general acceptation, at this time, when the opportunity and need for improvement in the quality of the currency we are using is so widely felt. As yet, however, there is such a wide divergence of opinion as to what qualities are needed to make a currency as good as gold, and as to the methods which may be safely adopted to make it plentiful, that the motto just quoted is hardly definite enough to be appropriated as a rallying cry by either of the two parties into which the country may be said to be divided upon questions of finance. On the one hand are those who believe that a money standard subject to as little variation as possible, by which values may be computed, exchanges effected, and contracts fulfilled with uniformity and equity, is of the first necessity to every well regu-

Digitized by Google

lated government. That experience has proved gold to be the least variable and best adapted to the purposes of a monetary standard of all known substances. That, therefore, the United States should adopt and maintain a gold standard and pay its obligations in this universally recognized medium.

On the other hand are the upholders of the "irredeemable currency principle," of all shades of opinion, from the man who defends it only as a temporary, and perhaps questionable expedient, to him who declares that "the use of gold as money is a barbarism unworthy of the age, and that the 'progressive' dollar is a 'paper dollar so issued that it shall never be redeemed.'" They are best known as "inflationists," but as many of them deny the fitness of that term and it is discourteous to call men by names which they dislike, they may, perhaps be spoken of as the "greenback-party," until they announce some descriptive title by which they desire to be known. The plan generaly advocated as the proper one by which to evade redemption may be called the "interconvertible-note scheme," and is familiar to all.

Briefly stated, it proposes that the government shall issue all paper currency directly; shall determine its volume, make it a legal-tender, and defer the day of payment to the end of time by repealing the "specie-resumption act." In connection with this, is a plan for the issuance of bonds, bearing a low rate of interest—say $.03\frac{65}{100}$ per cent.—with which the currency shall at all times be interchangeable at the option of the holder; reliance being placed upon this adjunct, to give the currency adaptability, stability, and a current value—some claiming that this will make it equivalent to gold; others being quite indifferent whether it would or not.

A discussion of this scheme has been attempted in the following paper. It is neither exhaustive nor systematic, but rather desultory, having some reference to recent authoritative expressions of the views of the greenback-party in this State. No pretense is made of competing with those utterances in rhetoric and eloquence —both from confessed inability and because of a conviction that the subject is one demanding calmest exercise of the reasoning faculties, rather than the play of the emotions—but, it is hoped, with a constant recognition of the gravity and the intricate and difficult nature of the questions at issue.

There are those who maintain that it is not a proper function of

Digitized by Google

the State to furnish its people with currency; that the public should be supplied with money, as it is with bread or coal, by individual enterprise; that legislative interference in this direction is always mischievous; that the State discharges its whole duty, in this connexion, when it insists upon a rigid performance of contracts; that a proper and self-regulating adjustment of the volume of currency can only be provided by a system of bank-issues duly controlled by law. And indeed it is not easy to see how, under governmental management, a spontaneous adaptation of the currency to the necessities of business can obtain unless the government adds the somewhat complicated machinery of banking to the operations of the Treasury Department, which no one as yet has been so "progressive" as to propose.

But these are questions which will not be opened here, as they would needlessly complicate the main question of resumption; and it may be admitted, therefore, for present purposes, that the power of issue is a sovereign right; that the government should take upon itself the manufacture and issuance of currency, and that the profits thereof should no longer fall into private hands, but should be claimed by the government and applied to the reduction of taxation.

This admission, however, is a very slight step toward an endorsement of the interconvertible-note scheme. We are, very properly, disposed to be exacting as to the kind of service we receive at the hands of the government, and certainly in this matter pride, patriotism, and self-interest unite in demanding that the currency to be furnished shall, in quality, be second to none. Our present supply cannot be so described, even if there be those who enthusiastically call it the "best money the world ever saw." Why? Because, of the highest functions of money, some are but imperfectly filled by it, and others not at all.

1. As "a medium of exchange" it is restricted in its action, being unfit to take any part in international exchanges.

2. It is not a "common and stable measure of value," but a local and fluctuating one, recognized only within the limits of the United States, and, indeed, not so widely, for in a vast and important portion of our territory it has never come into use, nor is there any present prospect of its doing so. These might be unimportant points if we intended to emulate the example of China, and wall

Digitized by Google

ourselves in and other nations out, but so long as we desire to maintain our place and rank in the federation of the world, they are insuperable objections.

3. As "a store of value" it is a nullity, and it is believed this will be admitted without discussion, notwithstanding the fact that the resolutions recently put forth speak of the "intrinsic worth" of paper money. As for the proposed new issue, it is to be like the old, save in one thing, and that not an attribute of money. It will have no added security, for that is not needed; nor is there to be any better provision made for its payment; it will differ in this alone, that it is to carry with it, to the holder, the option of putting it into a 3.65 government bond if he desires it. Let us examine the probabilities of this option giving to the currency the high character that is claimed for it.

What is a circulating note? It is simply an evidence of debt. The aggregate of them, present or prospective, is a fraction—and not a very large fraction—of the promissory payments that are afloat in the country. All notes, bills of exchange, bank-checks, bank-bills, greenbacks, etc., are so many memoranda of claims, nothing more, nor will any particular formula which the greenback party decide to use upon the printed evidences of government indebtedness place them ouside this definition. Now, what is it that gives currency to this whole mass of paper credits?

1. The amount and nature of the security which lies behind it.

2. Its volume, as compared with the demand.

3. The degree of probability there is of its being paid at maturity, whether that be on demand or at a fixed future day.

As to security, we are constantly referred to the basis of the nation's wealth and faith and credit upon which the issues are to rest, and not unfrequently imputations are put upon the patriotism and common sense of any man who ventures to doubt the efficacy of this alone to make the money all that the most exacting could ask. The fact is, no sane man in the least questions the absolute solvency of the government, or its ability to pay every dollar it agrees to. But the assumption that all that is needed to make an obligation a durable one, is that its issuer shall have ample property to represent it, is unwarranted. If the conditions are such that not a dollar of that property can be claimed, except in the event of the final winding up of the affairs of the debtor—a contingency no one

Digitized by Google

contemplates in this case—then the efficiency of the security in upholding the market-value of the claim, is greatly impaired. As an illustration may be cited, a case which occurred in this State during the past season. A large corporation with assets claimed to be $1,500,000, and which is not considered an over estimate, finding itself in embarrassed circumstances, and desiring to protect itself from the sacrifice of property, which bankruptcy involves, adopted a plan for that purpose, which was as follows: A trust-mortgage was put upon the whole property in favor of trustees selected by the corporation who were to manage the estate, and upon this mortgage, bonds to the amount of $650,000, the amount of liabilities were issued, running for a term of years, and bearing seven per cent. interest. These were offered to the creditors, and as the matter was in such shape that they had no option, were generally accepted. The security, it will be observed, is as two and one-half to one, and yet from the fact that it is beyond the control of the creditors by process of law or otherwise, those bonds are not now worth over fifty cents on the dollar. Ultimate solvency, therefore, is not enough. There must in addition be a guaranty as against an excessive issue, that being an evil which is incident to the obligations of any firm, corporation, or government. The depreciation of a note is upon the face of it evidence that it is lacking in some one or more of the elements that are essential to its highest excellence. The present issue is seriously depreciated, and, as we know the security to be ample, there is reason to believe that its volume is too great; but this is not certain—at least it is not to be certainly inferred from the fact of depreciation alone—for it might well be that the refusal to redeem would in great part, or wholly, account for it. As to what is or might be a proper volume there is a wide divergence of opinion. Even among the small number of representative greenback men who recently met here in convention, the range was great, apparently from eight hundred to two thousand million of dollars. Nor does this in the least reflect upon the judgment of those gentlemen, for the fact is, that in the absence of the test of redemption in gold, it is simply impossible by any sort of inference to decide whether a given amount of currency be in deficiency or excess. As Dr. Spear forcibly puts it, "no government, unless officered by archangels, would be wise enough to decide how much currency will be needed for the convenient transaction of business—

Digitized by Google

and it is doubtful if even archangels would be equal to the task." Now, to whom is it proposed to entrust the settlement of a point so beset with difficulties—so fraught with danger?

One most notable feature of the convention just referred to, was the unmeasured denunciation of public men of all grades and of whatever party. So great is the venality and moral degradation in both executive and legislative branches of the government, in the opinion of one of the speakers, that he forbore from very shame to characterize it in fit terms. Their new party is, of course, to correct this condition of things. But no spasm of reform, however violent, no party, however pure, can be certain that the men it returns to office will prove to be all that could be wished; can be sure that none of those which it honors with place will be found unfit, by nature or training, to be financiers; that none of them will yield to the allurements that lead men away from the paths of correct, high-minded legislation. Nor will it be claimed that the party itself may not in time become demoralized and corrupted by long possession of power; and yet it is proposed to put into the hands of Congress unrestrained control over the volume of the currency—to confide to the keeping of these much denounced party managers and politicians, unlimited sway for good or evil over the most sacred and sensitive possessions of the government—its commercial integrity and credit. The man from whom such a proposition could emanate, so far from distrusting the average congressman, should have a faith in his sagacity, honesty, and self-restraint, so sublime as with difficulty to be distinguished from the ridiculous. Without endorsing any such sweeping abuse of our public men, it may well be believed that it would be most hazardous to entrust arbitrary control of the volume of currency to Congress; for its members are human—swayed by the dictates of ambition—subjected to the strain of party considerations—egged on, perhaps, by the clamor of a needy, unthinking constituency. It is a power too potent for mischief to be put into the hands of any man or set of men; it should, to the utmost possible limit, be left to the regulation of economic laws.

Nor is it for a moment forgotten that the greenback party claim for their plan that it affords an effectual safeguard against danger from this source; but let us try to analyze the pretensions of that claim. The invariable tendency to over-issue, and the inevitable

Digitized by Google

depreciation of an inconvertible currency have so often been demonstrated by past experience, that—as the good old way was to be discarded as too barbarous for this progressive age—the necessity of devising some plan for avoiding those evils was felt and acted upon. The result was the interconvertible bond-scheme.

It was heralded with much flourish, and the changes of its praises have been rung in infinite variety. Regulative control of the currency is only one of its minor, incidental merits. It is a heaven-inspired plan, the grandeur whereof is well-nigh too great for mortal contemplation. "Standing alone in its majesty, it is almost the *summum bonum* of human financial wisdom." It is to pacify all bickering and contention between man and man, and bring the blessed boon of peace to the immemorial warfare waged between God and Mammon. It is to arouse America from her lethargy and distress, to a career of unparalleled prosperity. and gild with a new glory the wings of our national bird. In short, not to multiply quotations, the laudation has been so absurdly extravagant as almost to beget doubts as to its sincerity. But in truth it is a specious, captivating theory, captivating in that it supplies a good, long, resounding word—INTERCONVERTIBILITY—to satisfy the imagination of those who are unwilling to subject themselves to the strain of a little thought upon the subject. Specious, because it "keeps the word of promise to our ear," though it would be all too certain "to break it to our hope," for, removed from out the glamour of hyberbole and stripped of its verbiage, what does this much vaunted proposition amount to?

Simply, that the government may put out a volume of irredeemable currency, the sole limit of which will be the amount of the public debt, (say two thousand millions, until we are so fortunate as to find a successor for Secretary Bristow, who will be wise enough to substitute the "marriage peal of increase" for the "funeral dirge of reduction,") and, having floated this currency, shall say to the holder, "If at any time you find you have a surplus of this money, or have any misgivings as to its quality, bring it back, and you shall have an interest-bearing coupon bond for it, to keep as long as you like." In plain, commercial English, the government shall do what all the bankers and brokers of our cities have advertised to do for years, that is, take our money on call at a low

Digitized by Google

rate of interest. There would be no need of exchanging or modifying the present issue of greenbacks in any way.

The government has only to announce its readiness to take our money at all times and pay us 1 cent a day on each $100, so long as we want to leave it, and the scheme is in complete working order. Why the public has at all times had the privilege of putting its money into United States bonds, which, even at the highest rate of premium, would pay a better gold rate than is proposed. Thousands of trusted and solvent institutions throughout the country have stood ready to pay four per cent. interest for money on call. The plan under consideration offers no new inducements, save possibly a slightly increased facility. That is all there is of it. Is it not an exceeding small goose for so big a boo? And yet there are those who sincerely believe that this unimportant privilege would put an effectual check on over-issue, and appreciate our paper money until it should be better than gold. Could human credulity go further? The class of men that would ever, under any circumstances, be able to avail themselves of it would be very small. Men of large, ready means would doubtless allow the government to protect them from loss during the temporary lulls that occur in business. The banks would hold their legal reserves in interconvertible bonds, instead of keeping unproductive greenbacks in their safes, as they are now obliged to; but the great mass of the community have not, nor are they likely to have money to loan on call. As a check upon over-issue, the controlling influence of this plan woule be absolutely *nil* so long as the current rate of interest exceeded .03.65 per cent., which it is very certain to do, for a long time to come, in spite of all the usury laws that can be spread upon our statute books. In countries where money is far more plentiful and cheap than with us, 8, 9, and 10 per cent. is found to be insufficient to control the demands of eager borrowers in times of speculative excitement; and at such times—that is to say, when control is most needed, the interconvertibility plan would be powerless.

Was expansion ever known to lower the rate of interest? Those who favor it do so on the ground that it will stimulate business and make the various industries more profitable, and it is the degree of profit with which money can be used, and not its quantity that regulates its price.

What is the course of events when an expansion takes place?

Digitized by Google

It has its rise, usually, in some such cause as the autumnal call for money to move the crops with which we are so familiar. We remember the pressure that was brought to bear upon Secretary Richardson, in 1873, to issue the forty-four million reserve, so-called, and had there been any form of law by which a larger amount could have been called out, it unquestionably would have been, and might, perhaps, have deferred the panic of 1873 a little longer only to have made it more severe and far-reaching in its effects, if that were possible. If at a time of unusual demand for money there exists machinery which can readily increase the supply, it will surely be set at work. Extended operations commence. The grain speculator begins buying for a rise; the merchant gives speculatives orders to the manufacturer, who increases his production, and they all become borrowers. The feeling spreads rapidly through every department of trade. Times are flush and men cease to be particular about a trifle of interest so that they seem to be making money by paying it. All during the ascending period of speculation this condition of things continues; and when the tide begins to show signs of turning, it increases in intensity; those who are holding—unwilling as men always are to accept the first loss—become more and more importunate in their demands until the recoil and the disaster comes. Long before this the government would be called upon for the last dollar which it held on call—and it would be a fortunate thing indeed if it stopped there. So long as inflation was running its mischievous career, the nerveless grasp of the interconvertible bond plan would be wholly relaxed. In the period of exhaustion which would follow the reaction, it might re-absorb some of the redundant currency. Under its workings there would be certain depreciation—there would be endless fluctuations of value—but of control or adaptation in any real sense, there would be none.

Adaptability to the legitimate demands of trade, does not mean that everybody shall have all the money that their credit, strained to the uttermost, would secure. One of the most beneficent features of the specie standard is, that under it, adaptability is confined within certain limits—the craziest mania for speculation can not increase the supply of currency indefinitely—and while this is the case, people cannot lay out an indefinite amount of money in all kinds of commodities at once. Excessive investment in one direction involves curtailment in another; and though at such times

Digitized by Google

other forms of credit are very greatly extended, the fact that every man is liable to be called upon to meet his maturing obligations in a medium which is rigidly limited in amount, acts as a powerful restraint, the need of which has been so often demonstrated.

The measure of value of paper credit is the degree of men's faith in the actual performance of the promise to pay. It is sometimes said the greenback is not a promise to pay, or should not be; it is simply a token of the coined credit of the nation; a pledge for a given amount of the nation's wealth. This pledge may or may not serve the purposes of him who holds it, and if not, then the fact that it is never to be redeemed, materially lessens its value for him. He has a right under such circumstances to be skeptical—to question the assertion that it is as good as gold or better. In absence of redemption, how is this assertion to be put to a crucial test? How change this ideal money into concrete money? It is upon its face an obligation of the United States. But it will certainly not be paid on demand, nor is there any future time, however remote, fixed for its payment. Now, a note which will be paid at maturity, is worth its face to the holder so long as he does not want to use it, but if he does want to use it, it certainly will not be worth par, however easily it may be converted into money at the market rate. This market rate being a thing which constantly varies, dependent as it is upon diverse contingencies. Especially would this be the case with a note bearing no interest and having no stipulated time of payment; nor would it wholly remove these objections if the maker stood ready to give another form of writing deferring the day of payment a long time, or indefinitely, and bearing interest at considerably less than the market rate. This is very trite and commonplace and would be superfluous talk, if we were not constantly told that the new greenback, a precisely analagous case, will not be amenable to these laws of trade, that it will be an exceptional phenomenon and have a fixed value.

If, with all deference to those who make it, one questions this statement, he is told that it will all result from interconvertibility with the 3.65 bond. But what assurance is there of this? A dollar-note, if ninety-nine more be put with it, will bring a government bond; but the price which the latter will command is a matter of pure speculation. The note will be worth as much as the bond

Digitized by Google

and the bond worth just as much as the note, but the chances are as infinity to one that neither of them will equal the standard coin-dollar of the republic.

Again, we are told that the greenback is as good money as the best, because it will purchase anything that is in the market to be sold, which is true in a certain sense. If the sole function of a dollar be to buy things, without reference to how much it will buy, then is the greenback all-sufficient, otherwise not. But we do not want to measure our dollar by pork or flour, or cloth or paper. No such measurement would satisfy our suppositious skeptic, the holder of a greenback. It would be very much as though he were to go to a store to buy a yard of cloth; upon getting it he suspects it to be short measure, and asks the clerk to measure it once more. This is done by laying it on a bolt of yard-wide sheeting, but this does not wholly satisfy him, and he requests that it be laid on a certified yard-stick. The shop-man assures him, however, that this is superfluous, and indeed out of the question. Yard-sticks are relics of a barbarous age; the nominal measures as fixed by the manufacturers are correct and sufficient for all purposes, and our friend departs still doubting. Gen. Butler, from whom the idea of a yard-stick illustration is borrowed, asks, with fine irony, if we want millions of yard-sticks and quart-pots with which to redeem the measured articles? No, we do not; but we do want every trader to have enough sealed weights and measures to enable him to see to it that he gives honest measure. And this is what we want in connection with our money; an honest measure that will not vary according to locality, or stretch and shrink with every change in the financial barometer.

If it can be converted into the minted coin, it will have an equal purchasing power, and then will the "blood-sealed greenback" be something more than a mere rhetorical flourish. It will be a measure of value, bearing a certificate of correctness, that can be used with confidence. As has been well said, "the fact that a tattered, dirty bill of some unknown, one-horse banker, in a little Canadian town, commands a high premium, or any premium over the money of this republic, is a national shame and disgrace." The money of a government like this must be above suspicion or reproach. We have a right to know that the paper token actually represents the standard dollar which it professes to, and for this reason there should

Digitized by Google

be a simple test that can be understood and applied by the most untaught capacity—by the holder of the smallest note. If it be redeemed, that is a test, and the only test of its worth, as it is the only safeguard against over-issue and consequent depreciation.

It is often said that any pretense of redemption in gold and silver is a delusion, or something worse. Mr Secretary Field denounces it as "a base deceit, a fraud, and a lie, while three to ten times the amount of paper is issued, to one of gold with which to redeem the same." Mr. Allis says it is "contrary to the laws of God and truth, and a fraud upon its face;" and quotations might be multiplied to show the strong language used upon this point. Mr. Allis cites a few facts to substantiate this assertion, as follows: After stating the amount of gold in the world to be five thousand million of dollars, he says: "The total amount of indebtedness of the principal nations of the earth is at the present time about twenty-seven thousand millions of dollars, all payable in gold; or over five times the amount of gold in the world! Suppose for a moment that the owners of the five thousand millions of loanable capital of England should call for their gold and get it; then," he asks, "what are the owners of the twenty-seven thousand million bonds going to do?" What, indeed! If it be allowable to make the somewhat violent supposition that a combination of English capitalists could be formed who were able and willing to get control of all the gold in the world, and run a corner on it—it would have to be admitted that a very deplorable condition of things would ensue. But, to say nothing of the absurd extravagance of the supposition, where will this kind of reasoning, logically carried out, lead us? The legal-tender currency of the United States to-day, is about three hundred and seventy-five millions, and not the wildest of the green-back-men talk of over two thousand millions; that would be an outside figure.

Now, the public debt of the United States, is not far from $2,000,000,000; the State, county, and municipal debt, (estimated,) $2,000,000,000; the corporate and individual debt may be put down at, $30,000,000,000; a figure well within the probabilities though making no pretense to exactness. Thus, making a total of 34,000 millions, all payable in lawful money. Let us suppose for a moment that the holders of the State, county, and municipal indebtedness should call for their lawful money and get it. Then, what are

Digitized by Google

the holders of the rest of the indebtedness to do? They, too, would evidently be in a bad way unless they could wait for the government to increase the capacity of its paper-mills, and turn out 32,000 millions more of legal tenders. This is childish talk, it is true, but it is just the kind of argument which has to be met. It is a perfectly logical conclusion from the reasoning of the greenback party that unless there be a volume of currency equaling the entire indebtedness of the country—national, corporate, and private—then is all pretense of paying ones obligation in lawful money of any sort, "a deceit, a fraud, and a lie" upon its face; and all enactments to enforce the payments of debts are contrary to the laws of God and truth, and will inevitably lead to disaster. To this absurdity is the argument fairly reduced.

Every business man knows when he deposits money in his bank, that funds are not kept in its vaults to liquidate all its liabilities at any moment. The prudent banker knows what his average line of deposits is and knows the cause of its variation. He has learned from experience what proportion of it he can loan with safety to himself and his depositors, and this he proceeds to do without any attempt at concealment, advertising it, indeed, by periodical statements; nor is the faith and confidence of the depositor in the least impaired by a knowledge of the notorious fact. The foundrymen, the lumbermen, the agricultural manufacturers, who met in convention here the other day, have become the successful, wealthy men that they are by a judicious but by no means sparing use of their credit. Was it a fraud and a lie for them to make their notes payable in lawful money, although every one of their creditors knew that they did not keep in their safes or in their banks, subject to check, a tithe of the sum needed to meet all their outstanding liabilities? Not a bit of it. It was an honest promise, honestly fulfilled; the obligations have been met according to their terms. The government could presume upon this principle of trade with greater safety than anyone else. In times of panic, when distrust has taken possession of the minds of men, the solvency of every individual, firm, or corporation, is more or less questioned and excessive demands are likely to be made growing out of this want of confidence. The solvency of the government being sustantially unquestioned, it would never be subjected to runs or any other than legitimate demands. The government says to each of us, "you

Digitized by Google

shall pay your debts;" let it add moral force to this mandate by scrupulously setting the example.

In support of his proposition concerning the government taking our money on call, Mr. Allis advances, among others, the following arguments: Comparing the two forms of government indebtedness, that is, gold bonds and greenbacks, he says: "They are equal in obligation and security, but we find there is a difference in their value of twenty cents on the dollar, and why? It is not from the quantity, because their combined amount is in any case the same. It is clearly on account of their quality. Now, suppose the government should all at once treat the greenback debtor the same as the bond debtor, what would be the effects? It would not lower the value of the bond, because its value is fixed by its quality alone. There can be no escape from the fact that it would at once raise the value of the greenback to the equal of the bond. We have here an absolute surety that conversion into an interest-bearing bond would bring up the greenback to the value of the bond." This somewhat confused statement is quoted at length that it may not be garbled.

We may concede the absolute surety that free conversion into any bond would bring the greenback up to the value of the bond into which they could be converted; and the surety is equally absolute that conversion into a bond bearing 3.65 per cent interest, would not bring them up to the value of one bearing interest at six per cent., with which comparison was made at the outset. The government can, with justice, treat the bond debtor and the greenback debtor alike in just one way, and that is by leaving the status of the bond debtor unchanged and bringing the greenbacks up to that standard—which can only be done by making the greenback, as the bond is, an obligation definite as to time and payable in gold. Equality obtained by any other process, however disguised, would debase the bond, and just so far as it did so would be repudiation pure and simple.

Again, as another proof of the magic power of interconvertibility, we are cited to the two kinds of currency afloat, "greenbacks," and "national bank-notes." In the hands of the people they are of equal value, because interconvertible, the one into the other—but "we are told with much impressiveness," in the hands of a few they are not of equal value; in the hands of the national banks,

Digitized by Google

national bank-notes are worth 107 in gold, and why? Because they can exchange them for 6 per cent. bonds! It cannot, he adds, "be claimed that this illustration is not a fair one because the national banks had first deposited the bonds. The same would be true of the people under the interconvertible plan. It is a possible conversion into interest-bearing bonds that gives the value of gold!" Judging by the exclamation points with which this argument is garnished, a good deal of stress is laid upon it and yet we should have to go a long way to find a more glaring instance of misapprehension of facts and of false reasoning.

In the first place, Mr. Allis did not make his point quite so strong as he might; the government only allows the issue of 90 per cent. of the par value of the bond in national bank-notes; therefore, according to his reasoning, the value of the dollar in the hands of the banker is not 107, but 117.

Secondly, there is no more difference between the value of the greenback and the national bank-note in the hands of the banker than in the hands of any one else. The greenback is quite as potent to redeem the bond which he has pledged with the government as his own bank-note would be—and as a matter of fact 99-100 of the bonds that have been lifted, have been redeemed by depositing greenbacks with the treasurer for the protection of the outstanding notes, the retirement of which is a slow process.

But is it worth while seriously to discuss an argument based on the assumption that the redemption of a piece of property which has been hypothecated for an amount considerably less than its value, and the deposit of a sum of money on call taking a receipt as evidence thereof, are transactions identical in their nature? If a man have a $1,000-bond pledged as collateral security to a loan of $100, should those dollars when they came into his hands be quoted at 900 per cent. premium?

The confusion of ideas in this case arises from confounding the market-price of an article with its possible utility. The variation of the degree of utility of money in the hands of different men is a principle recognized alike by the political economist and the transcendental philosopher.

A twenty-five-cent shin-plaster in the hands of a starving vagrant may bridge the awful abyss which lies between life and death—to a Stewart its importance is a quantity so infinitely little that it

Digitized by Google

would be by no means adequately expressed by a fraction which should have one for its numerator and four times the many millions of his vast estate for a denominator; and the utility of the quarter is a constantly shifting value through all the infinite gradations which lie between the beggar and the Crœsus. Emerson says: "We may pay labor at one rate, say ten cents an hour, but not an instant does the dime remain a dime. In one hand it becomes an eagle as it falls, in another a copper cent. For the whole value of money is in knowing what to do with it: One buys with it a land-title of an Indian and makes of his posterity princes; or pen, ink, and paper, or a painter's brush, by which he can communicate himself to the world as if he were fire; and the other buys barley-candy."

Those who can gravely assert that the market value of money shifts with this variation of utility; who habitually talk of the intrinsic worth of paper tokens; who denounce the principle that honest debts should be paid as a falsification of financial and political truth; who believe that a simple legislative enactment would, like the touch of a magic wand, lift the nation from the depression resulting from its errors and place it upon the summit of commercial prosperity—may well lament that the science of political economy is so little studied and understood.

The one idea from which the advocates of the greenback-scheme derive more support than all others, is, that to dismiss all thought of redemption, and if need be increase the volume of currency, would quicken industry and at once restore us to permanent commercial prosperity. Nothing could be more fallacious. We have seen what the course of events invariably is in times of expansion—the rhythm, so to speak, in the rise and fall of prices, and the manner in which alone substantial benefit can be reached. But the gentlemen of the greenback-party are not, as a rule, speculators; they are seeking—as it is to be hoped we all are—the real welfare of the nation; they would by no means work with a view to the enhancement in value of a limited number of commodities in which they are especially interested. They are not looking to a rise in lumber, in iron, or in the two when manufactured, while the farmer should get the present low prices for his grain and wool, and the cotton-planter and spinner sell their products at a loss. But no



Digitized by Google

economical principle is better established than that a general and permanent rise in prices benefits no one. If the price of commodities rises equally, no one is better paid for his goods or labor than before, and only by a prolongation of the rise indefinitely would even the seeming of money-making be kept up. The farmer and artisan would receive more and more of the crisp, fascinating greenbacks, but would find their purchasing power rapidly growing less and less, and would be lucky if in the end he did not, like the barber's brother in the Arabian Nights' tale, find the fresh, handsome tokens that the magician, "Interconvertibility," had paid him, to be nothing but worthless leaves clipped in semblance of money.

Mr. Mill says of this idea: "It calculates on finding the whole world persisting forever in the belief that more pieces of paper are more riches, and never discovering that, with all their paper, they cannot buy more of anything than they could before. No such mistake has ever been made during any of the periods of high prices. That which was mistaken for times of prosperity, were simply times of speculation—the speculators did not think they were growing rich because the high prices would last, but because they would not last, and because whoever contrived to realize while they did last would find himself, after the recoil, in possession of a greater number of pounds sterling without their having become of less value. If, at the close of speculation, high prices had been maintained, no one would be more disappointed than the speculators." The great fortunes that were made during our war-inflation were made by men who bought commodities, and held them during the period when they went up and the paper went down, and were sagacious enough to dispose of the commodities and hold the paper while the reversed process went on; and the bankrupt-courts show a sad record of the fate of the thousands of business men who had not kept themselves in a position to do this. And, to-day, the truth is that although so many of us are afflicted with a plentiful lack of currency, there is a surplus of it in the country.

Mr. Allis—whom I quote so often because he is the principal mouth-piece of the new party in our State, and because his ringing rhetoric is so dangerously eloquent—tells us that "millions of men stand eager and chafing for work where there is millions of work for every laborer." Aye, and there are millions of money lying idle, the owners whereof would be glad to use it to bring the two

Digitized by Google

together in any enterprises that promised to be safe and fairly remunerative. Large amounts of money are accumulated in all the commercial centers and also in provincial towns. It is not hoarded in banks from choice. It is loaned more freely and cheaply to men who are worthy of credit than it has been for years. No banker or capitalist likes to see his money lying idle or allows it to if he can help it—the great danger to our banking-system has arisen from boldness in using balances, not from a miserly hoarding of them. The fact is that prudent men, as a rule, are not at the present time large borrowers; those who are in business hesitate to extend their enterprises with borrowed money and those not actually engaged have misgivings about embarking at this time. There is a lack, not of currency, but of mercantile reliance, on the stability of financial affairs; there is incredulity as to the safety of enterprises—which will remain so long as the greenback party is large enough to continue to threaten the nation's integrity and credit, with its visionary schemes. Over the great bulk of the credit currency of the country which is composed of notes, bills of exchange, bank-checks, etc., the government exercises no control further than to enforce the fulfilment of contracts; but there is a portion of it which the government does control, that is the greenbacks, and the management of that fraction has been such that it constitutes a loose, unstable element, vitiating the whole mass. But put stability into our finances, remove the element of uncertainty they now involve —and confidence will be once more restored. Not to spring up in in a night, like Jonah's gourd, as the greenback party promise, for it is a plant of slow growth; but not on the other hand nourishing the embryo of a worm which shall smite and wither it. The accumulations of capital, ever alert to compete for a chance to earn a fair income, will begin to disperse into the channels of trade quite as fast as it can be properly assimilated and a healthy stimulus will be given to all legitimate branches of industry.

The superior economy and convenience of a paper currency is, of course, admitted by all, and redemption does not imply abandonment of it. It is not probable that the physical character of the circulation will be much changed, except by the restoration of silver for change-money, for which purpose paper is a very defective material. In this connection, attention may be called to the annual cost of maintaining the fractional notes. The following fig-

Digitized by Google

ures may be a surprise to others, as well as myself. "The annual issue of fractional notes being about $36,000,000 on a circulation of from forty to forty-five millions, shows the average life of the notes to be, say, 15 months. The estimates of the treasury officers having charge of the business, show the necessarry expense of maintaining this currency, during the last fiscal year, to have been $1,410,746. This does not include the expense attending the handling of the fractional notes at the different sub-treasuries and depositories, all of which receive them for redemption, and which, if added to the expense incurred at the department, would show the total cost of maintaining the fractional currency, equal to about fifty per cent. on the annual issue, and corresponding with the interest on the amount of bonds which may have to be sold to procure, say thirty-six million dollars (gold value) in silver-bullion for coinage, and which would give silver coins of the nominal value of forty-five million dollars, a gain which would pay the expenses of the mint for a long time. Notwithstanding the expense incurred, and the care which has been exercised by the government to renovate and keep the fractional currency in good condition, it is well known that a large percentage of the notes in circulation, particularly in localities not convenient to banks, are deteriorated to an extent rendering them quite unfit for use. It has also been counterfeited to a much greater extent than coin, and the detection of the spurious notes is much more difficult than counterfeit coins. The loss to the public from this source must ultimately be very considerable. The "wastage" as the small percentage of these notes, worn out or destroyed while in circulation, may be properly termed, falls mostly upon a class of people least able to bear it. It is no satisfaction to a man who suffers the loss of one-tenth of his day's wages, by receiving a twenty-five cent note which no one will accept, to be told that it reduces to that extent, the expenses of the issue of such money by the government."—(Report of superintendent of mint, 1875.)

One more consideration and I have done; it is upon the hardship which it is urged, resumption will inflict in certain directions. Every change in the value of money does some injury to society, and in acceptance of this axiom it must be admitted that to resume specie payments will work adversely to the interests of the debtor class to just the extent that currency will be appreciated. But in

Digitized by Google

all inflation arguments the injurious effects are exaggerated and all compensating benefits are ignored. There is a given addition, say 12 per cent., on the volume of the currency, to be provided for in the payment of the aggregate indebtedness. But if the date of resumption be fixed at some future day, then the change will be steady and gradual, and being all the while in one direction and its amount constantly known, it could be arranged for to a great extent in advance—discounted so to speak. If the present act be adhered to, it would be at about the rate of one-third of one per cent. per month. This, it is true, is quite an item. It is 4 per cent. per annum. But the benefits to be conferred upon all classes, debtor as well as creditor, are so great as to be very cheaply purchased at that price. The truth of this assertion can be demonstrated.

The theorem just stated that "every change in the value of money does some injury to society," applies, it must be observed, to small and rapid fluctuations equally with larger and slower ones. We pick up a morning paper and see that gold has risen or fallen one-half per cent., or one or two per cent., as the case may be. We read the statement with indifference, and if we give the matter any thought at all, we are apt, most of us, to think that it is something that concerns the community at large very little; that its effects are principally confined to gamblers on the stock or gold board, who neither need nor deserve the sympathy of men engaged in legitimate pursuits. But this is a most superficial view. All importations, which are paid for, of course, in gold, and all home products which come into competition with foreign goods, are directly affected by the changes in gold. Whenever any decided change occurs the prices of the commodities are at once modified accordingly—heavy, low-priced staples following very closely, lighter and more expensive goods much less so. But to follow all the minor, daily fluctuations, would so encumber and complicate the details of trade, that it is simply out of the question, and it is not attempted; instead, there is added to the price of the goods a margin, over and above what would else be satisfactory as a sort of guaranty against the loss likely to arise from these changes, and, like all guaranty charges, it is large enough to cover all probable loss and leave a profit. It may very well be that not every importer and manufacturer distinctly recognizes this element and fixes this charge with mathematical exactness; it would be better for the

Digitized by Google

consumer if he did, because the more crude such calculations are the more likely are they to be unjust. But experience and the example of those who do perceive this element, regulate the conduct of those who do not. Many economic laws are obscure until analysis reveals them, but none the less do they exact obedience.

The result of all this is, that the consumer of these commodities, constantly pays something above the maximum price, for all the gold which he thus indirectly buys, without getting the benefit of any decline unless it be decided and prolonged. To illustrate this point—if it be not superfluous—let us look at an example which shows its workings in the simplest form. Every country banker and foreign-passage ticket-agent, has an arrangement for selling foreign drafts to those of our citizens who desire, for any purpose, to make remittances to Europe. He draws direct, but, of course, does not keep funds in all the European cities; the drafts are protected by a banker or broker in New York who has direct communication abroad, and who supplies him with blank drafts, a list of foreign correspondents, and the gold rates for the different denominations of foreign moneys. Accompanying these is a letter of advice directing that until further notice, a given percentage must be added to gold-rates when currency remittances are made, and this percentage is always somewhat larger than the highest market quotations at the time the letter is issued. On a rising market the letters advancing, this percentage comes with commendable promptitude, but though a declining market is followed, it is more tardily so; they are apt to wait a while to see if the decline is permanent. If, to avoid this obvious loss, the banker keeps a gold account in New York, and protects his drafts with coin, he does not usually feel that he can afford to hold the gold and take the chances of the market for a much less rate than the New York broker would charge. There is, therefore, on all these remittances, and their aggregate is very large, a margin of from one to two per cent. taken from the purchasers, who are, as a rule, poor though thrifty, as a direct result of the daily changes in the value of our money. Though not so readily seen the same kind of an addition, but larger in percentage and vastly greater in aggregate, is put upon the goods before alluded to. And this sort of thing cuts both ways; from every bushel of wheat that is sold and from every product, the price of which is regulated by export-de-

Digitized by Google

mand, a margin is taken to provide for probable decline in gold. Of course this bears equally upon the creditor and debtor, but the small amount of any one of these slight additions which falls to the share of the latter class, when multiplied into the number of the transactions of a single year, would amount to far more than the burden which would be laid upon them in wiping out the existing difference between gold and greenbacks, and at the end of the year they are no better off, for the difference still remains unprovided for. By avoiding the introduction of any such element of uncertainty in her finances, England has absorbed almost the entire exchange business of the world. London is a vast clearing-house. The United States do not act as a middleman between any two nations. Even France, as a result of the infinitesimally small discount on her paper as compared with gold, has relinquished to England the greater part of the international exchange business she has heretofore held. Slight as the depreciation was, it proved enough to cause this loss. This is fully realized, and with a view to putting a stop to it, the Bank of France has been accumulating coin until it has three hundred and forty millions of dollars in coin in its vaults against a note circulation of five hundred millions of dollars. The day of redemption in France is very close at hand. It is believed, too, by those competent to judge, that they are strengthening themselves with excessive caution.

The fluctuations consequent upon our unstable currency imposes upon this nation a yearly tax, which, if levied directly, so that it could be realized, would raise a howl loud and deep enough to effectually drown out that which Mr. Orledge assures us now comes up from "the saloons of bankers, dens of brokers, and columns of a venal press;" and this tax goes, not to help bear the burdens of government, but into the pockets of the importers, the speculators, and, alas! that it should be confessed, of the bankers and brokers aforesaid. For, with better means of information, and money at hand to act upon it, it is this class who always profit by an unsettled condition of finance, at the expense of the needy and the uninformed. The farmer, the mechanic, the small dealer, the country banker, cannot have a telegraphic instrument clicking in their shops and offices all day long, to post them on the price of gold, and if the currency were fixed and stable in value, they would be at no disadvantage on that account.

Digitized by Google

If it be true—as does not yet appear, and let us hope will not—that the producer, the poorer consumer; the "millions" as opposed to the "millionaires," are clamoring for a continuance of the irredeemable stuff, we may well say to them, in the words of the melancholy Jacques, (but slightly paraphrased):—

> "Poor deers (dears)! thou makest a testament
> As worldlings do, giving thy sum of more
> To those who have too much."

And let it be borne in mind that the 3.65 interconvertible scheme would do nothing to lift the burden of this tax from our shoulders even if it were to fully meet the expectations of the most ardent advocates. The greenback-dollar would have the same value as the bond-dollar, and let it be conceded for a moment that the latter should approximate so closely to gold as to be considered equivalent to it. No time-bond with a fixed rate of interest can be stable in value, subject as it must be to the various vicissitudes of the money market. Our six per cent. gold bond—than which the world knows no better—is constantly varying in price. The staid old British consol ranges from 87 per cent. to 94 per cent in gold, and the 3.65 bond could not be exempted from this law, and as the greenbacks are to be interchangeable with the bond and with nothing else, they would sympathize with every change. The nominal premium on gold might be very small—but no matter how small—fluctuations above and below 99 per cent. would be just as inconvenient and expensive as above and below 87 per cent.—within certain limits the element of uncertainty would remain and effect—as we have seen in the case of France—all relations depending upon foreign commerce; and the importer, the broker would inevitably be called upon to guaranty the business community from the effects of the fluctuations just as they now are; and men who guaranty anything have to be paid for it by those who are protected, and so, as was asserted, the burden of this tax would be upon us just as it now is.

The advocates of the interconvertible scheme, while they claim to be the especial champions of the debtor class, say that they propose to make greenbacks equivalent to gold. If this be so, then it is not easy to see in what way they propose to be more careful of the debtor than those who favor the resumption straight. There is no hocus-pocus, no legislative sleight-of-hand, that will bring gold and

Digitized by Google

greenbacks together. The gap between them exists; it was made at the expense of the creditor class and when bridged—if it is bridged—it must be at the expense of the debtor class, no matter by what method it is done. And in the interest of that class it cannot be done too speedily, for it will insure benefits that will far outweigh the cost.

The phenomena of finance are amendable to the inexorable law which holds throughout the universe—work cannot be done without expenditure of force—there is no sort of maneuvering by which something can be had for nothing. And every man who undertakes to demonstrate—as some do—that the margin between gold and greenbacks, can be wiped out without costing anybody anything—indeed giving everybody something to boot—should be consigned without hesitation to that limbo which is set apart for circle-squarers and inventors of perpetual motion.

But to be rhetorical and eloquent, to indulge in illogical inference and inconsequent assumption, has ever been the prerogative of the upholders of an irredeemable currency. The brain of the opium-eater teems with pictures for which no coloring is too glowing, no language too florid. For him, time and space are annihilated and all laws, suspended; he rises superior to sublunary things, he scales the dizziest hights with ease, and floats heavenward on clouds of pearl and opal, free from the vulgar trammels of gravitation. And in like manner when a man becomes capable of believing that he can bestow intrinsic worth upon a paper currency—when he yields to the fascination of the idea that irredeemable printed tokens can be so manipulated as to be better than gold—superior to the law of supply and demand—exempt from the dangers of misuse—competent to cure all the economical evils of society—there is no vagary too wild for him to adopt. It is a mania that has at intervals possessed the minds of men throughout the history of modern civilization and wherever it has obtained sway, its rule has been marked by anarchy and ruin. Its latest phase is the

"LEGAL-TENDER INTERCONVERTIBLE-NOTE SCHEME,"

and were it not for its immense capacity for mischief, the deplorable effects of which would visit all alike, the worst fate which its bitterest opponent could wish would be to see the flimsy, tatterdemalion proposition, exposed for a few years to the merciless criticism of natural laws!

Digitized by Google

Dr. HOYT: We have now the three financial papers before us. I have no doubt that there are gentlemen present who would like to make some remarks on those papers. I regret very much on this account that we have in the programme of the Academy of Sciences for this afternoon, two valuable and important papers, which have been prepared, and which must be read this afternoon or not at all, and that accordingly, so far as members of the academy are concerned, the discussion will have to be brief.

Discussions were limited to five-minute speeches.

Mr. ORLEDGE: I do not propose to discuss this question. I do not think that any man in this room is fool enough to pretend to discuss this question, when he is limited to five minutes. The gentleman who has just finished reading a very able paper, has thought proper to throw out ideas, and has thought it his purpose to say that those ideas were the ideas that are being advocated by the greenback-party. If he can tell me where there is a greenback-party in this State, I would like to know where it is. I know where there is an organization that is trying to educate the people on this question, and such gentlemen as Mr. Leland can do good service for the whole country by dealing with us fairly and honestly and not using the articles that he has acquired by his education to cover up the honest sentiments of his soul and heart. When I see bankers laughing in their sleeves because they think he has laid down principles that cannot be answered, I feel that it is proper to say a word in self-defense I do not say this for any party. I say it for those who think as I do, that there is a way for us to get an honest money that shall be worth its equivalent in gold, without going to individual men for their credit, which is worth in prosperity one hundred cents on the dollar, and in adversity, not a penny. We are not after any moonshine schemes, You tell us about the substantiality of your gold, and your banks. God's moon is substantial, but we can not get it. We want to get down to something that we can take hold of. Now, what is our position to-day. If you get down to the real hard-pan, we are owing to-day, more than we can pay. We have nearly $3,000,000,000 of national, and $2,000,000,000 of other debts. We have nearly $800,000,000 of currency in the country, and the question is, how we shall get along with that debt, with the least possible burden to the people who labor. For remember, gentlemen, you who are in

Digitized by Google

the banks, produce nothing; you are mere conveniences to help through the business of the world, but you do not add one penny, one dollar, one kernel of corn to its value. [Applause.] Now, what I want, and those who are acting with me, so far as I can understand, is a good currency, that shall be sound, and if we can have that in direct connection with our debt, and save us a part of the interest, it seems to me it is for our interest to do it, and our duty to do it. I believe, if the greenback had been treated honestly and fairly, and if the men who come up from the saloons of the bankers and the dens of the brokers hadn't had more influence on Congress than the blood, and bones, and sinews of our men, it would be so to-day. We should have had a greenback-issue, as the French franc was, a legal tender for every debt. Now, if we can get out of our debt, a currency that is perfectly safe and good under all circumstances, whether we can float $100,000,000 or $200,000,000, is not the question at all. The question is, whether we can float it, and use it as a currency, and save the expense of interest, chances of the blood-suckers sucking the blood out of our bodies, and leaving us helpless, without a muscle to move. A thousand-dollar bond, being a sacred debt of the United States, and for which we are all held liable, that bond is equally good, equally valuable, equally sound, if it is cut up into a thousand pieces and used by us as currency.

Secretary FIELD: I have listened with a great deal of pleasure to the able papers which have been read, and particularly to the last one, and I sincerely thank my friend, Mr Leland, for giving us that very able address. With his consent and that of the academy, I shall publish it in our next volume with pleasure. He has brought out some points I did not expect to hear from him. I thank him sincerely for it. He shows me exactly where he stands, where I supposed he did stand; where most men, I suppose, in the United States stand, who occupy the position he does, as a banker. His interest lies in that direction. I do not blame him. I presume if I occupied that position I might look at this monetary question from an entirely different standpoint. I am a greenback-man. I believe you all know it. I believe in a greenback currency; a currency convertible into a low, gold, interest-bearing bond, and convertible again into greenbacks at the pleasure of the holder. I believe in it, because I see in it, I think, a principle which will reduce the rate of interest, which I believe to be the milk in this

Digitized by Google

finance-cocoanut. Interest is the cancer which is eating at the very vitals of industry; it is taking the profits from every person in the broad land who is engaged in the varied avenues of industry. I think I see in this principle of an interconvertible currency that which will largely regulate interest. If the government fix the standard of interest at 3.65 per cent., it will be a great governing power. Whenever there is a large demand for money, interest will naturally increase, and persons who hold bonds will convert them into greenbacks, because they can make more money thereby. If interest rises to four, five, or six per cent., holders will convert their bonds into greenbacks, and use them as long as they can to better advantage than in bonds, when they will convert them into bonds again at pleasure. Mr. Leland intimated in his paper that we did not propose to pay these greenbacks until the end of time. I believe in paying these greenbacks whenever Uncle Sam says they shall be paid. If they had been payable on demand there would have been no occasion for their issue; for if the soldiers who went into the field to fight the war of the last rebellion had received these little bonds, and they had been made payable on demand, they would have called for the gold immediately. Why was the government compelled to issue these little bonds, called greenbacks, at all? Simply because the gold of the country, meanly and coward-like, found its way into the pockets of the money-kings and misers of the land. Like a coward, it refused to aid in putting down the rebellion to the extent of a dollar. When Secretary Chase demanded gold of the banks, to put down the rebellion, not one dollar could be had. They said to him, we will loan you our faith and credit, but not one dollar in gold. What did he say? He said, we will issue bonds on the faith and credit of the government, which is ten times better than the faith and credit of any private individual or public corporation. That currency we desire to make convertible into these bonds, and re-convertible at the pleasure of the holder, thereby appreciating the value of greenbacks, so they shall be equal to gold.

Dr. STEELE: I want to hear Mr. Leland answer with reference to the currency restriction. Mr. Benton spoke of currency regulating itself. I am not quite able to say that. I sympathize with Mr. Benton's views all the way through. There is a point there I want to see elucidated. I do not want to hear one side all the time. I

Digitized by Google

would like to have that made a little clearer, how we are going to have a currency that will adapt itself to just what we want. I do not see that we are going to get back to a stable currency by anything Mr. Leland has suggested in his paper, because gold certainly is not stable. I do not know where we are going to be benefited by leaving one kind of paper currency and going back to another.

Mr. BENTON: There is an apt illustration at hand, in relation to controlling the volume of money in the country, in the fractional currency. The government has the power to issue $50,000.000. There are between forty-two and forty-three millions in use. Why not all of it? The wants of trade say just how much of this circution is needed, and no more comes out. In relation to fractional currency there is no redundancy or stringency. If a man don't want it he goes and buys a greenback. The necessities of trade govern the amount of fractional currency and there is the point the gentleman who read the last paper made. We are charged with inflation, yet if you get it you must get it in gold; the standard of the amount is fixed by the same law, the economic law, the law of convenience. There is no more fractional currency than needed, and no less. Just enough. It is so with the interconvertible bonds. Men would not have any more greenbacks than they need. They are both one. That is the doctrine. The controlling of the volume of the currency by the necessity of the people. It is illustrated in this way. If I have a farm that will support just so much stock, I do not want to buy more to put on that same farm. Men do not buy any more money than they want, any more than they do any more stock than they can take care of. I don't keep any more horses on my farm than I want. I don't keep any more money than I want. That may seem a poor reason, but it is the law. The principles are essential which I lay down in the governing of the volume and stability of the currency. What regulates the value of the money that we use? President Steele discussed examples showing you that gold was one of the most variable and fluctuating commodities in the country. The idea that money is to be the reservoir of value is one of the most fallacious. Money is the medium of exchange, and fixes the value at what I can change one article into another. The reservoir of value is the interest or use a thing will give me. I do not want money for that; I have got

Digitized by Google

other things. Give me a thousand dollars in pure gold; I can with it buy wheat. I do not want it to be coined; it is expensive. Bullion retains its value. Coin does not retain the value. There is where I object to a bullion-currency, because it is subject to loss. It is not fixed and stable. We want a currency that is fixed and stable.

Mr. WOOD: There is a difficulty arises in my mind, in reference to these bonds, into which the currency might be at any time converted. I have heard it suggested that they might be from $100 and upwards. I don't see that there need be any restriction. They might be issued from five dollars upward. Say, that when a man had this currency he did not want, he could get bonds. When he wanted this currency, would he be under any obligation to go and get the greenbacks? Why not use the bonds themselves? They would certainly be transferable, and ought to be. Would not it result in a short time in being an interest-bearing currency.

Mr. BENTON: That thing did actually occur during the war. The government issued a compound interest-bearing note, but they were soon all speedily retired, because they bore interest. The bond retains value, not the currency. A circulating medium that retains the value is likely to be hoarded as the compound-interest notes were.

Mr. WOOD: How can that be regulated? You say that the bond would not be transferable.

Mr. BENTON: It is not legal tender.

Mr. EATON: I do not wish to see the gentlemen, who read this paper, entirely annihilated because he possesses learning, and because he has read a paper possessing considerable merit. I do not rise for the purpose of replying to the paper, because I hope I have too much sense to attempt anything of that kind; but I rise more for the purpose of asking some of these gentlemen in the rear, some of the friends of the measure, to come to his rescue on this occasion, and to supply what seemed to me to be wanting in his paper on certain points. He refers eloquently to the indebtedness of the country, to the indebtedness of corporations and to individual indebtedness, and now I would desire to hear some of these gentlemen, that feel so much interest in the fine-spun theory that he presented here, to come forward and show us illiterate farmers how those citizens who have their farms mortgaged and in debt

Digitized by Google

upon note and bond, which debts have been increased under our greenback currency, shall be enabled to meet those obligations, to pay their debts, their bank debts, their mortgage debts, under a system of contraction of the currency which seems to be necessary, in the event that the government assumes to resume payment in specie of its outstanding indebtedness.

President BASCOM: You seem to be pretty well agreed on one point, and that is that a prime feature in a good currency is stability. Certainly all working-men require stability in prices. I know of none but speculators that can be profited by instability in prices. It has been questioned here, to-day, whether gold furnishes such stability. What I have to say, I wish to say to that point. I cannot feel that Dr. Steele has materially affected this question by what he has presented to-day, because what he said in reference to gold, has been said in reference to it as being taken in connection with a paper-currency. If I have a yard-stick made up of two metals, one of four-fifths and one of one-fifth, and I know the four-fifths is capable of any degree of contraction and expansion, I cannot consent that it be measured by the contraction and expansion of any other yard-stick. So, what gold will do in connection with a paper-cur-currency, subject to paper, is not a fit comparison. I wish to urge the stability of gold.

First, the large amount of gold in the world. The whole civilized world is in large possession of this one commodity, and has been accumulating that possession for many thousands of years, so that the whole amount of gold in the world is oceanic. We cannot easily modify the price of wheat in Minnesota by ordinary demand, because of the amount of wheat in that market. You cannot easily affect the depth of the ocean by dipping out of the ocean, because it is the ocean. You cannot affect the amount of gold because it is oceanic.

There is a great evenness of the demand in the world in reference to gold. That demand is spread over all the world. It is like the evaporation over the ocean-surface. If there is evaporation in one tropic there are rains descending in another, and the whole amount of water being taken out and returned to the ocean as a whole is exceedingly even. Take the world, the use of, and return of gold that is escaping from that use, is exceedingly even; therefore, the value of gold should remain stable. Gold is fluent; the

Digitized by Google

ocean is fluent. If I would succeed in reducing it in the area of a mile I would have to shut off that mile from all other parts of the ocean. If we do reduce the value of gold or raise the value of gold in this case by a large demand, in any one given quarter, gold the world over is ready to supply that demand, and in connection with the transfer by paper, is one of the most fluent of all commodities, and would rush in to compensate any extra demand.

Again, gold is indestructible. The water taken out of the ocean will, in a short time, get back to that ocean, so the gold I take for any special purpose from the currency is, in a short time, sure to get back to that currency, so it is able to meet any sudden demand without any instability.

Again, I dip the water out of the ocean; I cannot use it without getting the water back to the ocean, and the ocean remains at the same level.

Again, gold is used almost entirely for currency; very little in the industrial arts, except in reference to luxuries. Almost all the industrial demand is in reference to luxury; therefore, if gold is sunk in value, it will draw off a large supply from luxury, and tend to raise it again. Nothing will give way quite so easily to demand, as elegancies; necessity must be met. When gold rises in value it will be drawn out of these elegancies. Elegancies serve the purpose of a reservoir; the reservoir takes in the water when it is flush, and yields the water when it is dry, and as a matter of fact, gold has slowly increased in amount, and slowly decreased in value, in the world's history so slowly, as not to affect slight periods of time, only affecting long periods, so we may say this decrease of values is in some respects uniform.

Mr. CLARK, of Green: I have listened with a great deal of admiration to the ability and ingenuity of the paper last read, and the gentleman, with a seeming frankness, touched one point which the contractionist seldom touches — the effect upon the debtor class, and the ingenuity with which he explained that was certainly admirable. There is one fact he didn't touch. He assumed a damage to the debtor class of about thirteen cents — eighty-seven cents to one dollar of greenbacks. He didn't take into consideration the depreciation in property that will be incurred to get that one dollar. Now, what is resumption? It cannot be anything but contraction. We see, now, in our govern-

Digitized by Google

ment, an attempt to do away with our greenbacks, and the proposition has been offered to stop their being a legal tender in 1877. The moment that is done, the banks, in 1879, the time of resumption, knowing that at that time they cannot redeem their bills in greenbacks, but must bring out their gold—what will be the effect? For two years previous to 1879 the banks will be retiring every one of their bills which they can obtain, so that we shall probably not have three hundred millions circulating medium. Where are you going to get the money to pay one hundred cents on the dollar? I will state, as an example, what occurred in our county: In Monroe, there was a gentleman, the guardian for some children; he went to the bank and inquired if it would be safe to sell some land for one-third down, and take a mortgage for the balance. They said you had better be careful. If resumption takes place in 1879, that real-estate will not be worth one-third of its present value. How about the debtor class?

Dr. STEELE: My friend, Professor Bascom's argument, is an ingenious one, but it is an argument that is theoretical, and not with reference to the facts, and yet his theory and illustration is not quite good. He forgets that the ocean fluctuates a great deal, and that there are points in the ocean where the water is a great deal higher than at other points, and also that the tides are swept along continually. I don't care anything about that particularly. I put the value at a gold standard, throwing out of account the currency. While we have two standards, a greenback and a gold standard, by pulling it down to a gold standard I show there is a fluctuation then. It is a popular opinion that gold is of similar value all the world over. That is put down in political economy as one of the reasons why gold is a good standard of value, why gold makes good money, and yet Professor Cairns shows very conclusively, I think, that gold is not of the same value all the world over, or anywhere near it. The ocean extends everywhere, but is a good deal higher in some places than it is in others. Gold is an object of value according to the cost of its production, like every other product; of course, with the modifications that are effected by the demand and supply. It costs a certain amount to get an ounce of gold here in the United States. It costs a good deal more to get an ounce of gold in England than it does in the United States. It



Digitized by Google

costs a great deal more in Italy than in England, and it costs much more in India than in Italy. It costs to get an ounce of gold in India four, five, or six times as much as it does here, and that is the value of gold there, with reference to the value of commodities, and with reference to the labor that is requisite to secure an ounce of gold. It seems to me, that if that be true, and the facts I have brought forward here to-day be true, gold does go up and down as much as any other commodity; a great deal more than wheat, a great deal more than pork, a great deal more than any other staple commodities go up and down. Of course, it can't go up and down more than the whole mass goes up and down. When we can get an ounce of gold for so much at one time, and we have to give two or three times as much for it at any other time, why is it not as legitimate to say that gold rises and falls, as to say anything else in the world rises and falls.

Mr. CLARK, of Rock: I want to ask a question. I have not been able to understand the rise and fall of gold, and I have a different view of it. I supposed gold was uniform, and other things fluctuated; that it was greenbacks went up and down instead of gold. Now, in our own country, gold has been the only thing passed for the purpose of paying debts. For a quarter of a century, in one of our own States, it is passed in defiance of our law that greenbacks shall be the legal tender. The custom of the country will not allow greenbacks to circulate there. I was there six years, and I have heard from there at other times, and I have not heard them say anything about gold going up and down there. It has been uniform there.

Dr. STEELE: It is a thing they don't say anything about, but gold, notwithstanding, goes up and down.

Mr. CLARK, of Rock: I have been where it has been paid out and received, and never heard of its depreciating in value. Property maintains its value there, and all the articles of trade and commerce seem uniform in price; and the price of it compares favorably with all the rest of the United States.

Mr. BENTON: What have they compared gold with there, to know whether it is stable or unstable.

Mr. HARRIS: I think the whole question centers on just this one point; what is money? There are gentlemen who go to school, teach, read books, and answer, money is a commodity. I have

Digitized by Google

been asking myself for years what is money, and if we take for a starting-point, that money is a commodity, I don't see but we shall have to embrace the soundness of the view of that paper. I think we have been asleep like Rip-Van-Winkle. Instead of finding money as a commodity, we find it is something else. What do we use as a matter of fact to make our exchanges, our every-day business, the business of this generation, and the generation that preceded us, and I guess the generation that preceded them; we have used paper. There may have been times during that period in which paper money was convertible into gold at par, but the logical thought and inference is that money is a commodity, because at certain times it has been convertable into gold. This convertibility has been very oppressive to the liberties of the people. The question with me is, how can I, by my labor, supply my wants, and the wants of my family. I have much that I can exchange with my neighbor, but it appears to be necessary to have enough circulating medium, and which is in fact credit, to exchange for something which labor creates, and thus provide ourselves with the products of other producers. Then we must have such a state of things that every producer, who is likewise a consumer, can provide himself with those products, and have a surplus for his declining years. But whether it is good to let a man have a large accumulation, is a question for the coming generation to decide. The Rothchild-family possesses a great bulk of the wealth of the world, while all the rest of the world stand still and do nothing about it. I have too much of the declaration of independence, or the Constitution of the United States in me ever to say aye to that. I have been considering this question. I am taxed to death and work as hard as any man in this community, and I am going to urge upon my fellow citizens to remember that they live in a Centennial year, when they can take the same steps our fathers did, a hundred years ago, and declare themselves free and independent from the money-kings. I feel old Patrick Henry in me every minute, "I know not what course others may take, but as for me, give me liberty or give me death!" The money-question is a vital question; it comes home to the heart of every man, woman, and child in the country. If money is a commodity, it is under the control of man. We can use it. We have to come to this foundation, that every man has a right to govern himself, and he shall have the right to use his prop-

Digitized by Google

erty just as he chooses. If these men are interfering with our rights, it is our province to restrain them; and we must send men to our legislatures who will not allow, or see a greater rate of interest than the health of the country, as increased by its labor, will permit, and then we have a measure that is used for measuring the values we have created; and when we see a dollar we know what a dollar is.

Mr. ANDERSON: I don't get up for the purpose of making a speech, only to make a few remarks. I will illustrate what I conceive to be money. I claim that money is a material, and that material is stamped by the government, whether it is paper or gold, and that its value is legal. Gold is not money unless it is stamped by some government to make it money. Therefore, the value is not in the gold but it is in the law to make it money. I don't blame Mr. Leland, or any other gentleman engaged in national banking. for opposing a greenback-party, or a greenback currency. The profits of those national banks are great, and they will fight a greenback-man. Mr. Marshall, of Illinois, stated how one of the national banks was created. He said he had some friends down east who took $300,000 and bought $300,000 worth of government bonds with them. They went to the bank comptroller in Washington, and deposited those bonds and organized a bank, and got a bank-charter. The bank comptroller gave them $270,000 in national currency. Of course, they brought it home and loaned it out to the people for ten per cent. What did this government receive in return from that corporation for that $270,000? Only the deposit of $30,000 more than we pay them, and yet we are paying them six per cent. on that. There was $270,000 they could loan at ten per cent., $27,000 a year, and six per cent. on the $30,000 is $45,000 per annum for leaving with the government $30,000 worth of bonds more than they issued.

The truth is, the national banks, are becoming wealthy. They have a greater power than the old banks on which Gen. Jackson placed his foot. There are two thousand of those banks, and they are becoming a power to-day. There are over seventy bank-presidents in Congress to-day, and not over three farmers. That is the reason you have to pay a high rate of interest. If the greenback can be converted into a low-interest bond, I believe the rate of interes will be vastly reduced. Mr. Leland stated that no person was

Digitized by Google

benefited when prices generally rise. I don't think there is a farmer that believes the doctrine. When prices rose during the war, we were benefited, and when prices had a general fall we were crushed, and crushed badly. When, in any country, work and labor is low, and poorly paid, there is a state of degradation. I know a high rate of interest has been crushing every industry in this country. Let us wipe it out. As our lamented President Lincoln said: "This government is a government of the people, by the people, and for the people." If he was living to-day he would say it was a government of rings of bankers, by rings of bankers, and for rings of bankers.

Mr. ROBERTS; A man who has been educated in the prejudice of a belief in a gold currency, or a currency on a gold basis, it seems to me needs considerable courage to get up before this audience and take that side of the question; and I feel a good deal of timidity in getting up here before you and taking that side of the question; but my real purpose, is, perhaps, more to make some inquiry and ask some questions, because I find statements made by these greenback-men seem to conflict. One gentleman states that there is an inherent value in the greenback, it has a value of its own. Another says, that the value of every article is in proportion to what it costs to produce it, the labor necessary to produce it. We know about the amount of labor necessary to get a gold dollar out of the earth, and in a gold dollar I suppose there are twenty-three grains of pure gold. Now what is the labor necessary to produce a greenback? I can not see that there is very much inherent value in a piece of paper. It costs a little something to make the paper, and it costs a little something to print it, but that cost may or may not represent the inherent value of the greenback. In a gold dollar there are twenty-three grains of gold, and that twenty-three grains of gold will pretty nearly exchange for a dollar's worth of products in any part of the world. Now, one gentleman stated here, it costs four times as much to get a gold dollar out of the earth in India as it does in the United States.

Dr. STEELE: I didn't say that. I said it cost four or five times as much to get possession of a gold dollar in India as it did in the United States.

Mr. ROBERTS: As I understand it, a dollar's worth of gold is

Digitized by Google

worth, and will exchange itself for about a dollar's worth of products all over the world. It is worth something to the holder or receiver of that gold dollar to know that there are exactly twenty-three grains of pure gold in that coin, and the government stamps upon that its value, and that is all the value that the government has added to it. If the gold was in its crude state, and you could assay it yourself, you could say it was twenty-three grains of gold just the same. The government stamps it, and if it is a genuine coin you feel certain that there are those twenty-three grains of gold there. The government stamp adds nothing more than that, more than giving you the certificate, and making it rather more convenient to exchange. The government stamp adds nothing to the value. How much would the government stamp add to the value of a piece of paper more than to suppose you wrote the word "one dollar" on it. Now, I suppose really, that which gives the greenback any value is the fact that it reads that "the United States will pay." That is what gives the value to the greenback; it is a promise to pay. If I should issue my paper for one hundred dollars, a holder of that paper, believing me to be capable of paying it when it becomes due, perhaps would be willing to lend me one hundred dollars, but he would want me to promise to pay, and to set some time at which I would pay. Suppose I was known to be a very rich person, and I should undertake to issue bills of credit, and put my name upon them; if they didn't promise to pay some time, of what value would they be? It would not make any difference to you how much wealth I possessed, if you held one of my notes, if you were not sure that when you demanded, you would get it. Suppose, instead of stamping $25 upon a piece of paper, the Government of the United States should stamp a nice picture of a cotswold sheep, and write underneath, "One Cotswold Sheep;" if you undertook to shear that sheep, how much wool would you get? That is just the value of a piece of paper that does not promise to pay you in gold, or some valuable commodity.

Mr. SELLERS: What is it that gives gold its value? Suppose the Government of the United States should take twenty-three ounces of iron: would it be as valuable as gold?

Mr. ROBERTS: The value of gold is just what it costs to produce it. You can produce a pound of iron where you can produce an ounce of gold.

Digitized by Google

Mr. SELLERS: I don't want to discuss this matter. It seems to me that it is self-evident that the government can make a piece of silver "fifty cents," or it can make a piece of cloth fifty cents. What is the use of discussing this idea? What I want is a basis that is solid; that when you and I each have five dollars in our pocket we don't care whether it is gold or silver. I have been a merchant for a number of years. I don't want gold to send to New York to pay my bills. I couldn't do it very well. I paid in one month, in 1864, a million and a half of dollars. I never used a dollar in gold and silver. I gave a check. We want a dollar that when we have a piece of gold or a piece of paper, we know it is worth so much.

Mr. ATWOOD: Our object is to get the truth; that is my object at all events. I came here to be informed, and I have heard both sides of the question, but I am frank to admit that I have seen no argument why coin should be the basis or circulating medium. President Bascom told us in his answer to Professor Steele, in his criticism on that, which refers to the fluctuation of gold, that gold should be compared by itself. The professor goes on and makes a comparison of the ocean with gold. There I fail to see any direct connection with the subject, any convincing argument. It is more light that I want. As to the gentleman's position here in reference to the gold dollar, I will volunteer this remark, that if this gentleman is worth ten, twenty, or thirty thousand dollars, and is a good, square, honorable man, and hasn't a dollar of gold in the world, his note is good, among business men though they never see a dollar in gold. The property he holds is the value; a full equivalent. The gentlemen say it would revolutionize society if gold was stricken out of existence. We are all worshipping this golden calf; falling down and worshipping this image that has been worshipped for ages. I am a farmer, and live down in the eastern part of Dane county. I came up to the great city for light and information, and I fail to get any information on this subject. I don't know but I am prejudiced; I don't wish to be; I am certainly willing to hear argument upon it. I believe that is the feeling of farmers generally. They are not so apt to be prejudiced by interest as many other men. I don't claim any better qualities for them. I don't think they are so liable to yield to prejudice as some other parties. I would like to see these things answered. We have a bankers' con-

Digitized by Google

gress which is arranging these things for us, so far as I can judge, and to suit their own convenience and interest.

Mr. DWIGHT: It seems to me that the difficulty with this interconvertible scheme is, that the interest is not high enough. I suspect if the interest was seven, eight, or ten per cent., all the bankers would be in favor of it immediately. This currency that could carry this country through the great rebellion, the greatest known in history, should certainly be able to run it in a time of peace. Can a people be said to be free whose currency is dictated by private individuals, by Wall-Street roarers, by caucuses packed by officials, links of the same sausage, from the same dog, from Washington to Madison? It is my misfortune to be related to wealthy persons on both sides of the house, and they are not any of them farmers. I have talked with these gentlemen. They are determined on specie payment. They say if you western men are lame we are sorry for it; you have no business to be lame. You should have lived within your means, and you would not be in this unhappy condition. We are determined to know whether specie payment will come. I have no doubt that it will come, and I have no doubt that the Potter-law will be repealed because of the influence of these men. The question is whether wealthy bankers, and a few other men, are to govern the people of the United States. We had better hold on, hold what we have, for that is about all that we will get at present, for the whole money-interest of the country is arrayed against you, and it is a power that controls Washington today, and that controls Madison. It is my opinion that you had better hold what you have, and not try to get any more at present. Put off specie payment for a little longer. The banks in Wisconsin have loaned to the farmers the rag-baby, and now they want the golden-baby. They have loaned to you a depreciated currency, and now they want a gold currency. Is it fair to say that gold is as fair a standard as the yard-stick? All bargains are compromises. There is no such thing as a fixed standard of gold; for it measures a bushel of wheat one day and three pecks the next. The yard-stick is thirty-six inches, no more nor less. I never heard a man go into a store and say, I want thirty-five inches of cloth. We want more currency than any other people in the world to do our business. Look at our large domains, how much is being cleared up, and fenced. The government-sells four and one-half and five

Digitized by Google

per cent. bonds to borrow money in Europe. With this system every man would rush to banking, because the greenbacks are going out of existence, and we are going to have a bank currency, only national banks, instead of State banks. We are in an abnormal and unnatural condition when these panics ensue. I discover that these gentlemen want high rates of interest. They are going to pay the President just the same, and the members of Congress are going to have just the same salary. You clod-hoppers, who can't appreciate the beauties of art and statuary, ought to live in a state of nature, because it produces produces health and longevity; therefore it is good for you, and let us roll and riot in luxury.

Mr. STILSON: I dont propose to take up the time of this convention on this discussion but a moment, and I propose to call the attention of the convention to the circumstances and surroundings of my friends Dr. Steele and Professor Bascom. My friend, President Bascom, says he admits the instability of a mixed currency, but such would not be the condition of a pure metallic currency. Those are conditions that never existed in this country, and never will; therefore the stability will never be seen until the millenium comes. The next point is, and it strikes every man who owns a farm that is not paid for, or a man who is involved any way in business, and that is, how to meet taxation? The bankers who are arguing this resumption of specie payment, are not honest, for they don't tell the whole story. In the last ninety days, I have traveled more than five thousand miles. I made it a point to converse with them confidentially; and uniformly found these bankers to hold this, that before the day of specie payment, they will retire the circulation of half a billion, down to forty-five millions, the lowest amount that they can, under the banking-act. Others said, "we will retire the cash dollar we have got; we have made a good thing so far, and we will make another good thing in selling our bonds at a premium; and we will make another good thing out of our money, when everybody wants it." How are you going to bridge over this chasm, a chasm caused by the retiring of this currency? It can only be done by disaster, the most widespread; disaster which will as far exceed that after the war of 1812 and 1815, as our national, our State, our individual debts, are greater in proportion to our population than they were at that time.

On motion, the convention adjourned, to meet in the Assembly Chamber at 7½ o'clock, p. m.

Digitized by Google

*EVENING SESSION, 7:30 P. M.*

President Stilson called the convention to order, and introduced S. D. Carpenter, of Madison.

## DOLLARS AND SENSE.

BY S. D. CARPENTER, MADISON.

If I should ask you what, of all earthly substances, things, or essences were the most desirable, longed for, labored for, prayed for, intrigued and "smouged" for, you would, no doubt, answer "dollars," and that would be sense, because of the truthfulness and "patness" of the answer.

And if I should ask you, what substances or things, that are worshipped by all, as deities above the gods on high Olympus, and are toyed with by kings and beggars, and yet as direct palliatives for hunger, nakedness, or any of the physical or spiritual wants of our race, are the most worthless and non-servicable, you would, no doubt, answer—dollars—as that would be sense, again, because the answer would embody truth.

The love of dollars, then, without the practical application of sense, may be said to be the cube-root of all our financial ills, and the sage who concocted the maxim that it was the "root of all evils," was not so wild as skeptics have sought to prove.

Dollars have a history and a science. Their history covers acres of octavo pages of wrong, oppression, violence, usurpations, and bloodshed, and a long catalogue of other crimes—so long that no man hath days allotted enough to even finish "part the first." Yet there is a more roseate view on the obverse side that should, in its proper place, be exhibited.

The science of dollars, unlike the general order of sciences, is naturally mastered by some at an early age, while the great mass seldom pass the rudimentary stage. The application of the practical science of dollars, is to get the greatest number of dollars with the least possible outlay of muscular, dynamic power, and to sell those dollars for the greatest possible amount of muscular, dynamic power. This is the true science of dollars, and covers the whole ground. It is a sort of lemon-squeezer and sponge combined, with running-gears composed of everything save conscience. Two factors are essential to a successful working of the machine,

Digitized by Google

on the millionaire broad-gauge—personal cunning, with audacity, and legal aids with pecuniary compliments placed "where they will do the most good." This criticism must be applied only to the side of the picture we have under observation, and not to that legitimate accumulation of wealth which justice approves.

The skilled fisherman always desires to manipulate his own net. His sciened eye points out the course, direction, and value of the school of mullets and gudgeons which he seeks to capture, and his practiced art enables him to pull in here—to let out there—to haul taut a line just at the opportune moment, or to loosen a cord when and where it is likely to do most good, and thus, by his ability to expand, while the gudgeons and suckers are being schooled, and to contract when numbers and position are most favorable, he is almost always sure of a large haul!

Now, this is precisely the sort of skill required by the successful dollar-fisher, *alias* the bullionist, who, with ceaseless observations, watches the financial pool to cast in the bait of expansion, until the hungry gudgeons congregate in large schools to nibble the tempting morsel, while, unobserved, the dollar-fisher has his "pals" engaged in setting the net, so as to cut off all retreat, and at the opportune moment, the long cords of contraction are pulled taut; the circling rows of buoys, or middle-men, *alias* brokers, are seen bobbing on the surface, and in due time the dollar-fisher, having secured his prey beyond a possibility of escape, hauls ashore his victims, denudes them of every particle of blubber or other valuables, and leaves them to rot on the ill-omened shore of adversity. But, to drop metaphor, let us come down to the bed-rock of plain facts, such as our eyes hath seen, and our moral senses have deplored.

For the last Centennial decade we have, as a nation, been talking about a specie currency, which none of us, nor our forefathers, have ever seen, nor have we dreamed of it in the fulfillment of our prophesies. We have said much, and done a great deal for a "specie basis." We have had it, too, in all its wild-cat and tame-cat glory, with its personal security, its real-estate security, its sand-bank security, and its State-stock security—safety-fund, red-dog and skim-milk systems, and after submitting to losses by the millions, under each and every system, we may go back in exultant pride to the halcyon era, from 1848 to 1860, when under a glorious

Digitized by Google

specie basis, we could get a paper dollar "presto-changed" into a metallic dollar! Startle not, for I have seen it done! Under the reign of this specie basis, and while it *did rain,* we could, and did frequently, with the Midas incantation of "I demand," obtain gold for paper!

O, it was a glorious sight, as marvelous as it was glorious, to see the modern alchemist prove the problem that was such a charmed secret in the seventeenth century, by walking into a marble front, and approaching an ornate counter, with a hand full of rags, and with a little incantation ceremony, pull forth a pile of ringing, shining gold! The sight was grand! glorious! enchanting as anything in the exploits of Aladdin.

The new Jerusalem, with its solid gold-paved streets—its walls of sapphire, beryl, onyx and other precious stones, was at best a commonplace ideality compared with the occular proof that alchemy was a science that actually turned rags and lampblack to gold!

But, alas, as among the cannibals, it is the food that fattens the body which sinks the heart, in view of the results to follow.

Glittering as were our halcyon days of gold basis it had its inevitable relapse, and thirty-eight New York banks, went down with a crash that buried millions beneath the debris. In other States the loss was still greater, and in one way and another, the people suffered losses by the many millions. Why did they lose? How could they lose, with a talismanic specie basis? Ah, there's the rub! There is just the place where the serio-comico, and more serio than comico, joke comes in!

This specie basis may be likened to the great Pyramid of Egypt, standing on its apex, on a lady's thimble. How long would the inverted pyramid stand on such a fine-point basis?

The history of all banking, from the days of Crœsus to the present hour, teaches us that bankers would not keep on hand a sufficient basis of metal to redeem their issues, if they could, and could not if they would. The only possible way to make bank paper perfectly safe, is to have a basis of a coin dollar for every paper dollar. Of course no bank would do this, if it could. There would be no advantage in banking, over the curbstone-broker, and without a "margin" the banker will not issue bills, and his bills are always unsafe to the extent of his "margin."

Digitized by Google

But, the law has often defined margins, say from ten to thirty dollars in specie for every $100 in paper, and with all the precautions—the solemn oaths required, and with quarterly examinations by sworn officers—even the margins nominated have been greatly contracted, and the same bags of coin counted in the vaults of half a dozen or more banks, and the official tables, prepared with great care by the best financial experts, demonstrate that between the eras of 1848 and 1860—embracing our hey-day of specie basis—*not to exceed one per cent. of paper was actually redeemed in coin*, and the country lost from 15 to 25 per cent of the paper! So, that in reality, the banking capital of the country, at that time, amounting to many hundreds of millions, when divided into 100 decimal parts, may be expressed as follows:

BASIS OF BANKING.

| | |
|---|---|
| Number parts confidence | 99 |
| Number parts coin—"a trace!" | 1 |
| Total | 100 |

The coin is solid basis, and worth its face, but it would take a million horse-power to again infuse 99 per cent. of the carbon of confidence into any system of banking. Confidence is easily exploded, and so are soap-bubbles. So long as confidence is unshaken it is as good as gold. If A owes B a gold-diamond brooch, and offers him one of brass, with a glass-setting, it is all just as well, so long as B has confidence that the brass is gold, and the glass is diamond, but, that confidence once shaken, and the brass trinket is valueless. Just so with paper money, predicated on 99 per cent. of confidence and only one per cent. of gold. So long as the confidence-machine is wound up and kept in running order, all is well; but once let a screw get loose, a panic break out, and it will spread like the measles in the Fiji Islands, and then the 100 parts of coin and confidence shrink to one part in coin only, and that is dissipated as readily as jewels of honor from a three-cent politician.

A rush is made for the banks at the first note of alarm. The first shock generally closes them up, because confidence, their only stock in trade, is gone. So it ever has been, and so will it ever be, so long as the people are commercially wedded to banks. A final divorce is the only remedy. The best bank that ever opened its doors,

Digitized by Google

could not, without ample notice and great preparation, redeem all its issue in coin at once. The very nature of the system forbids any intention of the kind.

But, says the bullionists, "let us have the one per cent. then, that is better than nothing." Not much; my answer invariably is *go and buy it.* You can purchase gold under the worst possible phase of our present noxious system, at from twelve to fifteen per cent., which is a great saving over ninty-nine per cent.

I know it is an old maxim that "wise men change; fools, never," but as my change of belief in a metallic currency, to a knowledge of it sabsolute impossibility, so long as we are a debtor nation, comes from the soverign mode of reasoning *a priori.* I lay no claim to the bounty for wisdom, since necessity, and not mere policy is the law of the case.

I now believe, in the light of past history, that it would be a national crime longer to continue the national banks—that no bank of issue, State or National, should ever hereafter be permitted to exist, but that the government should furnish the people with their own currency, in suitable amounts to meet every legitimate requirement of trade and commerce at home, convertible into bonds of low interest, and reconvertible into currency at the pleasure of the holder, and then, if the government will not discredit and dishonor its own paper, but, like France, take it for all dues and make it a legal tender for every species of debt, save when otherwise already bargained, we may safely let gold take care of itself, with the assurance that however the latter might fluctuate in volume, by foreign demand or otherwise, the former must always be at par, and must not be sucked up, and whisped from us by any financial tornado that might sweep across the Atlantic. If we could consign gold to the non-user as money, and turn it over to the dicker of commodities, as did Lycurgus, in his onslaught on the usurers of Athens, we should no longer be its slave. Some people, however, think we must have a currency that all other nations will strive for, just to be in fashion, forgetting that our fashionable coats may be stripped at any time from our backs, by our sleek cousins in Europe, on creditor' warrants and bond-holders attachments.

With greenbacks current for all government dues, and a legal tender for all private and public debts, except as otherwise agreed, gold would no longer reign as monarch, and both government and

Digitized by Google

individuals could buy all they needed, at rates now prevalent in France, and that is next to no premium, unless the rule of cause and effect should be reversed.

While I yet cling to the idea of "hard money," as a phantom of my youth—a sort of day-dream, that would usher delight into the soul, to behold as a fixed reality, yet, I must say, a mixed currency while we are on the debtor side of the world's ledger, and while we have such a mountain of gold interest-bearing debt, menacing us across the Atlantic, would, it cannot be doubted, breed calamities as dreadful and devastating as the locusts of Egypt. To protect our coin currency, and keep it on a par with our paper, against the depleting attacks of a fluctuating, yet inexorable foreign demand, would be as dangerous and futile, as for a lad of six years, with no weapon, save a broken-bladed jackknife, attempting to protect a sheep-fold against a pack of half-starved wolves. Such a currency would always fluctuate like a pendulum between two intermittent and discordant forces. This kind of spasmodic struggle to protect a portion of our currency, as a "basis" for the balance against the depletion by foreign "balances," and the stream of gold going Europeward, to pay interest on a billion of bonds, to say nothing of the home demand for the same purposes, must end inevitably in specie exhaustion, and be followed by wide-spread financial distress and ruin; because our "basis" would be at the mercy, not only of our own gold-room sharks, but its relative value, like the mercury in the glass, would rise and fall at every breath from European marts, and thus our coin currency would become the shuttle-cock, the battle-door, and the foot-ball between our endeavors to protect it and European demands to deplete and weaken it.

But, if we depend not upon a metallic currency, or a base of convertability in coin, which all correlative history teaches us is a fraud, if we forget that a base of redemption, safe and reliable, never has been and never will be realized—we shall reap the bitter fruits of misplaced confidence. But if we have a currency of our own, secured by the integrity of forty-five millions of people, and backed by thirty billions of dollars of national wealth, may at our will become interest-bearing—a currency that foreign greed does not covet, we can, if we are wise, by leaving its production and regulation in the hands of the people, who have no motive to contract and expand,

Digitized by Google

for the sake of plunder, always keep it at an even temperature, and always at par, and let gold-gamblers take care of themselves.

Circumstanced as are the people of the United States, with the debtor side of their ledger much greater than the productive capacity of their mines, they need, and must have an elastic, instead of a rigid currency. For this purpose we advocate the bond and greenback interchangeability, to act upon the principle of the thermometer pendulum, which is composed of two metals, (brass and steel) whose powers of contraction and expansion exactly neutralize each other, keeping the ball of the pendulum exactly on equal distances from the point of infringement, in all temperatures. Thus, we learn from the science of mechanics, as applied to contractile and expansive forces, how to "regulate time," and why not draw analogous lessons to regulate financial matters?

But, O! says the bullionist, if you have the interchangeability of bonds and greenbacks, you must have the one in equal volume with the other, and this is "inflation." Not necessarily so, by a jug-full, we started out on this same principle, with the whole batch of 5-20s, and, as a matter of historical fact, the currency was never inflated beyond the demands of trade and commerce, and this goes to the very root of the objection, since contraction and expansion, at alternating periods, constitute the richest harvest of the money-changers, with the sole condition that *they* shall give the word of command.

Let us suppose for argument, that we had a redundancy of $500,000,000 of currency. A large part of the bonds representing that currency, and a large portion of the currency representing the bonds, are in the United States treasury, and everybody knows it. And we will suppose that the money-changers, in accordance with the habits of that class, resolve on contraction, as a means to reap the usual harvest from the distress that must follow. A million or more men with small means, yet having convertible bonds, finding the currency weakening under the boa-constriction of those who thrive only by contraction and expansion, swap their bonds for currency, and thus relieve the pressure, and then if the moneycrats suddenly expand, by throwing their millions on the market, to get up a "corner" in that direction, the million of men of small means, with their fifty, one hundred, five hundred, or five thousand dollars, sink them for the time being in interest bonds, and thus the bulls

Digitized by Google

and bears of the currency would find a checkmate among the people, who, with whetted sickles, would cut their "corners," and the volume of currency would run as even and regular as an engine under control of the best modernized governor. Thus, the very thing the bullionists charge as "inflation" would avoid the possibility of inflation, for business men are not such fools as to keep on hand an article in excess of its utility, especially when a metamorphose, that costs nothing, would yield more of the oil of profit than in the unchanged condition. The cry of "inflation" then, when stripped to the skin of its true import, is but a protest against a measure that would prevent both inflation and contraction. In short, it is the old "stop-thief" dodge.

If the supply of jackknives was limited, and some one should invent some two hundred-fold new, and almost indispensible uses for jackknives, the prices of jackknives would go up amazingly. So it is with anything. The more you increase its uses, and the necessity therefor, the more valuable and high-priced it becomes, if the supply be limited. And so it is with gold. If we only used for all purposes, say $50,000,000 per annum, it would become a drug on the market. Since bankers do not desire it in banking, on account of the trouble and expense of handling large sums, and the constant reduction of all sorts of standards to that of the American dollar. The present demand annually for gold, to pay interest, import duties, and the balance of trade, etc., is probably not less than $400,000,000, and the premium over the best paper money ever devised, the soundness of which is vouchsafed by thirty billions of wealth, and which no man distrusts, is from twelve to fifteen per cent. Now, let that demand for gold be more than doubled, as it would be if the greenbacks and fractionals, and all the "certificates," ($582,000,000, and, say, $30,000,000 for interest,) are to be redeemed in gold, and the volume of national currency raised to, say $600,000,000 to fill up the void by the destruction of greenbacks, and the national banks are required to keep, say thirty per cent., ($180,000,000,) specie reserve, making a new demand for gold of $752,000,000, there is no knowing to what altitude the premium on gold would reach, since, as it is now, we must send to Europe to pay interest alone, $60,000,000 per annum, on government bonds, with only about $200,000,000 gold in the Union, all told,



Digitized by Google

and the capacity of our mines for the past eight years have not averaged $50,000,000 gold. Now, if some mathematician can cipher our specie redemption and specie basis from all this, and show us a "remainder," he will have earned a greater renown than the discoverer of a world.

Should we deem ourselves competent to laugh at the economic discussions of such standard and eminent writers on political economy, as Dr. Adam Smith, M. Say, Ricardo, and others, we cannot afford to confront and defy the practical history of England and France. The lessons taught us by these nations ought to be worthy of notice, at least.

England, during her continental wars, and her herculean struggles with the giant Napoleon, all covering the period from 1798 to 1823, maintained her supremacy on land and sea by paper money, *and only by paper money!* So disastrous was the shipment of gold that she actually, by law, compelled the Bank of England to suspend, and this suspension was kept up for twenty-five years. During the eight years previous to specie redemption, she paid $640,000,000 of her debt, or $80,000,000 per annum. During the ten years next following, she paid $245,000,000, or $24,000,000 per annum, and during the next ten years she increased her debt $30,000,000, and it has, under a specie-resumption basis, ever since continued to increase, and finally has been practically repudiated, by funding the whole into annuity bonds, to run forever, at 3 per cent. No wonder that Wm. Cobbett denounced specie resumption as repudiation, which has thus far proven true, in the very letter of the law.

So much for English precedence, and now a word of France. That government has recently passed through one of the most disastrous wars known to modern times. Her armies and her very citizens were pinned to their own soil by their enemy's bayonets, and to obtain release she was compelled to relinquish two of her most prosperous and wealthy provinces, and in addition to paying her own war-debt, almost equaling that of ours, she was compelled, with hostile bayonets at her breast, to pay twelve hundred millions of dollars in specie to her enemy. She has done all this, and in about one-half the time that has elapsed since the closing out of our rebellion. France is nearly out of debt, her laborers are all busy, and of course happy; her workshops resound with the din of pros-

Digitized by Google

perity—her treasury is full—she has had no "strikes"—no murmurs, and no pauperism among the able-bodied. How did France accomplish all this? By specie payments? No! She accomplished it all by the almost unlimited use of legal tenders, which she has kept substantially at par by receiving them for all dues and paying them for all debts, save the indemnity to Prussia. Victor Bonnet, a French writer of note, and a bullionist, withal, has written two essays on the subject, and I cannot do better than to introduce the facts to you in his own language:

"What has taken place in France since the war, in relation to the paper circulation, which is taking place to-day, is a very curious phenomenon, and is in danger of being seriously misconstrued. It apparently reverses the economical and financial principles which the best authors on the subject have labored to establish. They have cautioned us against issuing too much paper money, having the quality of legal tender, holding that the volume of such paper should be very carefully limited, lest confidence in it should become impaired, and depreciation follow. Now, it so happened that, almost at a single step, in the midst of our disasters, we issued more than 1,800,000,000 francs of new notes; and that this legal-tender paper has kept itself at par—the only time when it fell below par, being upon the payment of the first installment of the indemnity to Germany. At that time, gold commanded a premium of two and one-half per cent., and singular as it may seem, *the price fell as soon as authority* was *given to issue bank-notes in excess of the previous limit of 2,400,000,000 francs.* In November, 1871, the note issue of the bank of France, had reached only 2,300,000,000 francs, and the premium was two and one-half per cent. By the end of January, 1872, they exceeded 2,450,000,000 francs, and gold had fallen to *one per cent.* A short time afterward, the limit of circulation was extended to 3,200,000,000 francs, and no further attention was paid to it; the premium on gold had become insignificant!"

The writer then goes on to say, by way of a contrast of facts, in speaking of the payment of the Prussian indemnity: "It would seem, that if we, the debtors, have been able to acquit ourselves of the debt thus easily, the creditor who has received our money, ought to have profited by it largely, and at once! But, in fact, exactly the contrary has happened. We have paid over 5,000,000,000

Digitized by Google

of francs to Germany, and at the same moment that country has encountered a most formidable crisis! Money has never been more scarce, or dear, and never has there been witnessed so many failures in that country," etc.

The fact is, that while France has been working and praying, Prussia has been receiving and rioting like a spendthrift son on the death of a wealthy father.

The late Senator Buckingham uttered a truism in the Senate of the United States, January 7, 1873, when he said:

"The experience of more than three-quarters of a century furnishes evidence that we have often exerted our energies until they have been nearly exhausted, in order to maintain a system of specie payments, which, as yet, has been only intermittent. * * The business of the country does not absolutely require specie resumption. * * The business of the country is never stationary, but is always contracting and expanding. When it contracts, bonds will be in demand; when it expands, currency will be in demand," etc.

Here is an axiom from one of the best political writers of the day, that cannot be gainsaid:

"Any debtor nation that bases its currency, and consequently its production and commerce, upon specie, exists, financially, productively, and commercially, on the suffrance of its foreign creditors."

I quote the following from Allison's History of Europe, 1815 to 1852, chapter 1:

"But if an increase in the numbers and industry of men co-exist with a diminution in the circulating medium by which their transactions are carried on, the most serious evils await society, and the whole relation of its different classes to each other will be speedily changed, and it is in that state of things that the saying proves true that 'the rich are every day growing richer, and the poor poorer.'"

Mr. Allison could well say this, with the fact staring him in the face, that under the specie redemption which began in England, in 1823, the number of land owners decreased from 165,000, in 1822, to 30,766, in 1861. Specie, then, is the rich man's pavement to more wealth, and the poor man's slough of despond and poverty. There is a perfect argument between the history of England, and the maxim of the English historian.

Digitized by Google

When I was a lad, which seems but yesterday, a man that could afford wheaten bread for his family was considered "well off." It was only the johnny-cake, hand-to-mouth men that were considered "poor cusses." A man worth $1,000 in cash was esteemed wealthy in the rural districts, while the resident of the city or large town that was the possessor of $10,000 was looked upon as a nabob, while such a thing as a millionaire was classed among the fables.

But, since then we have, as Senator Buckingham said, gone through many struggles to maintain specie payments, which have resulted in every instance in the loss of millions to productive industry, (we must remember it is labor that creates all wealth and makes good all losses,) while the losses invariably enrich the pocket of the non-producer, and now, to be considered rich, one must possess his hundreds of thousands, and to be a nabob, his gains must be counted by the millions. Verily have we not been going at railroad and telegraph speed?

How often are we pointed to our European loans as evidence of our increase of capital. O, says the bullionist, don't you see the stream of capital flowing in from Europe, as the product of our bonds? 'No, I do not see it, nor do I believe any one else sees it, for the simple reason that we don't get any capital from Europe, but on the contrary, we send capital there. Even if we violate the nomenclature of political economy, and call money capital, we get nothing of the kind from Europe, but at five per cent. interest, we send back every twenty years all we borrow, and just as much more for its *use*. Thus, every twenty years we send to Europe more than two dollars for every one we nominally receive, which makes us poorer and Europe richer to that extent.

But, says the bullionist, we get gold for our bonds, and that is a vast immediate relief. Now, in the first place, we don't, nor have we received a dollar from Europe in coin for our bonds. Then, what do we receive? Why, we either swap our bonds for other United States bonds on the market, or we take "store-pay." I mean by this, in plain English, just what I say. We sell our bonds to Europe *and trade them out*—not a dollar in coin passing the ocean—nothing but bills of exchange between English and French jobbers and American importers, interspersed with a little dicker, by courtesy called diplomacy, between the two governments. Let me introduce some testimony on this point. The celebrated pro-

Digitized by Google

fessor of political economy, at Oxford, England, Bonamy Price, in a recent lecture, quotes the following from an American journal, (New York Herald:)

"We have a country, for its size, its agriculture, its manufacturing and commercial advantages, far surpassing any other nation recorded in history, in proof of which did we not export last year nearly $400,000,000 worth of bread, meat-stuffs, and cotton; yet, our republic presented to the gaze of mankind last fall and winter the greatest incongruity of any other nation that ever existed, when hundreds of thousands of native-born American mechanics were reduced to the first step toward pauperism. When they approached soup-houses as mendicants; with blushing countenances and aching hearts, while corn by the ten thousand bushels was consumed in the west for fuel, and to add to our shame, thousands of French artisans left this boasted country during the September panic, and returned to their respective countries to obtain employment, whereby they preserved their true manhood and dignity of character."

After reading this extract, the professor continued:

"And I read in one of the journals of New York, to-day, that in the great State of Pennsylvania; in the coal regions, the very center of wealth, the very productive force of modern times, employment cannot be obtained. There is no food for the women; laborer's families are starving, and every kind of moral and social disorder is looming into prospect. Gentlemen, that is the great thing which I propose shall occupy our attention to-night. How comes it to pass, that in America, teeming with every powerful resource for making man worthy and great, that these fearful calamities are in prospect."

The lecturer then shows up the folly of our financial system, by which we have sold thousands of millions of dollars of our bonds in Europe, since 1860, receiving therefor nothing but barter, or in yankee parlance, for store-pay. This is what he tells us.

"Mind—loans always come to countries, not in money, but in goods! always! Do you suppose that if the nation borrows $20,000,000, or $30,000,000, that the foreigner sends $20,000,000 or $30,000,000 of paper-notes or sovereigns? What you borrow *is goods*, and, of course you have a jolly time over goods, and the gap you make in yourself is not perceived. All spendthrifts; that is

Digitized by Google

just what they do. 'Sufficient for the day is the evil thereof.' You (Americans) have been living on loans of goods to fill up the gap of your production, and then when you can get no more you are in a bad way. Your laborers must go home, and then, as the paper said one day, "the people are starving, and God knows what they will do!"'

This is telling us the truth in pretty flat English, and although it chafes our national pride, and quickens us almost to a desire to give the John Bull professor a sound clubbing for his insolence, and we should be justified in the chastisement, did we not know the smart comes from the sting of truth. However humiliating, we must admit the fact that we have dickered off our bonds for British store-pay, thus stimulating British production and paying British workmen; and our own artisans, laborers, and mechanics have folded their arms in sorrowful idleness and confronted starvation, while our financial statesmen have been dickering our bonds for European gew-gaws, jim-cracks, and manufactures that we had much better manufactured than bought at such a sacrifice.

In consideration of this high-priced calamity, our people have been cajoled and dosed with the idea that we were receiving rivers of gold from Europe, while in fact we have not received one ingot. For further proof of this we need not go to Europe to consult the impertinance of some professor, but have witnesses nearer at hand. While a portion of our syndicate loan was lingering in the lap of the Bank of England, amounting to $21,000,000, and Mr. Boutwell, as Secretary of the National Treasury, sought to check it out, the functionary was cut short, and not a dollar of gold could he get, but was compelled to take United States bonds in payment. Let Mr. Boutwell tell the story in his own way, which he did in the Senate of the United States, January 22, 1874.

"When the negotiations were going on in London for the sale of the largest amount of United States bonds that has ever been sold there at any one time, it was foreseen by the Bank of England, that a quantity of coin would accumulate as the proceeds of these bonds, to the credit of the government of the United States. As a matter of fact there was an accumulation of about $21,000,000. The Bank of England foreseing that there would be an accumulation of coin to the credit of the United States, which might be taken away bodily in specie, gave notice to the officers of the Trea-

Digitized by Google

sury Department of the United States, that the power of that institution would be arrayed against the whole proceeding, unless we gave a *pledge that the coin should not be removed,* and that we would re-invest it in the bonds of the United States, as they were offered in the market of London. *We were COMPELLED to do it!!*"

Again, we had an award at Geneva in our favor of $15,500,000, for the damage done to our commerce by the connivance of England with the rebel pirates. This award was to be paid in American gold, but not a dollar in gold did we get, but we "traded it out" for "store-pay." Let Mr. Boutwell tell what he knows about this transaction. He said:

"There is another fact known to all. We received at Geneva an award against Great Britain of $15,500,000. When this claim was maturing, the banking and commercial classes of Great Britain induced the government to interpose, and by diplomatic arrangements through the State Department here, operating on the Treasury Department, *secured the transfer of securities and thus avoided the transfer of coin!* In the presence of these facts, is it to be assumed for a moment that we can go into the markets of the world and purchase coin with which we can redeem one, two, three, or four hundred millions outstanding legal-tender notes?"

On this testimony, Mr. Drew, in his masterly expose of the folly of our financial system, remarks:

"As a necessary result of not getting the money we expected, as per testimony of Mr. Boutwell, we have had to take hundreds of millions of dollars worth of goods as per statement of Prof. Price; and, as a sequence, we not only find ourselves without money to work with, but our furnaces are blown out; our machinery rusting in idleness; our factories tumbling in by dry-rot; our railroad bonds protested for non-payment of interest; our banks stuffed with honey-combed collaterals; our merchants collapsing; our mechanics breaking stone on the highways, or eating the soup of charity; our prisons crowded, and the usurer and sheriff the only prosperous people."

When public attention is directed to the disastrous bent of our financial follies, and the laws of historical customs invoked to check them, and the people warned that specie-clamor is but the syren song to lullaby the populace to fatal slumber, while the Greeks are making off with the plunder, the bullionists cry out "croakers."

Digitized by Google

The Trojan priest who warned the ruler of Troy, that the wooden horse, planned by Ulysses, as a pretext of favor to the goddess Minerva, was a Grecian device for the destruction of the city, he was branded as a "croaker," and in spite of the clerical warning, the huge bauble was thrust through a breach in the wall, and though the popular goddess might have appreciated the honor, that self-same night Troy was consnmed by "Greek fire."

In the language of an eminent writer, "The epitaph *Troja fuit* will not yet be recorded over the nation's grave," because under our advanced enlightenment, our people worship truth instead of blear-eyed goddesses or wooden-horses, whose bellies are filled with consuming fire:

Then let Ulysses plan
His Trojan horse again;
Achilles may head the van,
With Ulysses in his train—instead of Hector.

Aaron was a bullionist,
And tho' it force a laugh,
His God refused the currency
Of Egypt's Golden Calf.

---

And though Ulysses strive—
Making matters worse—
I excel the Golden Calf,
'Tis but—a wooden horse!

Stuffed with Buccaniers,
To pray upon our store—
A representative of death,
And—nothing more.

Secretary FIELD: I didn't think I would say anything upon this subject this evening, for I had a five-minutes' talk in the agricultural rooms upon the same subject this afternoon. I was in hopes we might have gentlemen come before us this evening, and discuss this question from a hard-money or bullionist-standpoint, but if these gentlemen do not desire to come here and discuss this question; if they don't want it discussed, then I want to see it fully and freely ventillated on the other side. I will occupy the ten minutes, and perhaps provoke some one to occupy ten minutes more

Digitized by Google

on the other side. It was but a short time ago I saw in one of the newspapers of the east, that an honorable Senator rose in his seat in Congress, and likened the interconvertible-greenback scheme to the government taking a horse of a farmer in the autumn, when he had no use for it, taking good care of it through the winter, and returning him fat and sleek to the farmer in the spring. Now, that undoubtedly provoked a smile from those honorable and dignified members of Congress. It was a very good joke, but the application was bad.

It seems to me if the government has a few thousand horses they have no use for, if any gentleman chooses to take one hundred or more of these horses and keep them for the government through the winter and even the summer, for six months, twelve months, or two, or three years, and return them to the government without any charge for keeping, and just as good horses as they were before, that the government ought to be thankful for it, ought to consider it a favor. Now, if the government has bonds of indebtedness to the amount of millions, and are paying interest upon them, and any gentleman choose to say to that government, if you will take these bonds bearing interest and give me greenbacks, non-bearing interest bonds, it is certainly a favorable exchange for the government; and if he chooses to use these greenbacks for a period of six months, ten months, or a year, longer or shorter as he may desire, and return them to the government when he don't want to use them any longer, and take bonds again, the government is the gainer. I look at it in that light, hence, I am in favor of this interconvertable scheme. It saves the government just that much interest for the length of time you or I, or any other person take those greenbacks, and hold them, and upon which the government pays no interest. As I said this afternoon, I think interest is the great point in this financial question. Capital to-day is earning eight, ten or twelve, and often-times fifteen per cent., while the labor and industry of this country, is not earning to exceed three. Can we expect a country like the United States to prosper; can we expect the people engaged in the various avenues of industry throughout this broad land to prosper, when capital and labor combined can not earn more than three per cent., and capital that is borrowed is absolutely earning ten. It is impossible. My idea of this interest question may be very radical; I think it is.

Digitized by Google

I don't believe that a man who has money to loan ought to be allowed by this government to loan it above the profit which can be shown arises from the useful industries of the country, and that is not above three per cent.; not that I have anything against these gentlemen who take ten per cent., or fifteen, or twenty. I believe them to be just as good men as I am; I believe them to be honorable, upright gentlemen. Neither do I blame them for taking that amount of interest. I believe it is the fault of the government for letting them do it. I believe it is one of the highest functions of the government to regulate money, and one of the most important things for it to regulate is interest.

I saw in a newspaper the other day, the Independent, of New York, of February 3, a money article, which closed in these words: "The question which the American people are called upon to consider is, whether they will have real money; money which carries its value with it, in the material of which it is composed, or a fictitious money that has no other basis than that of credit." Now, I take it from this sentence, that these men themselves mean, that the only money of this country, is gold and silver. When any gentleman rises here, as I understand President Bascom did some time ago, and says there is gold and silver enough to do the business of the world; that it ought to be done on that basis, that is, a dollar in paper to be issued for each dollar of gold, and no more, or as I understand it, a strictly metallic currency, I have no argument to make with him; I believe, however, every gentleman within the sound of my voice, will concede that we must have a paper currency. If we must have a paper currency, the great question for the American people to decide is, whether that currency shall be based upon the faith and credit of this great nation, or whether it shall be based upon the faith and credit of a private corporation. That is all there is to it. I prefer to have it based upon the faith and credit of this nation. While I have the most implicit confidence in several of the banking institutions of this city; while I should feel perfectly safe if I went there and deposited $10,000 to-morrow; nevertheless, I have a much greater faith, if it is possible to have, in this great American people. I have a much more abiding faith in this great nation. As long as we must have a currency, largely based upon faith and credit, I want to see the government credit, for upon that I can safely rely.

Digitized by Google

I want to see the government issue the currency directly to the people instead of a round-about way. I don't want to see it brought through a national banking institution, or any other institution where we have to pay interest on the bonds pledged for its security. The national bonds of this country are good, but not any better than the greenback, if the latter was made convertible into bonds bearing interest. We are paying millions of money to get it to us, when we can have it issued directly, without any expense whatever. We had a very able paper read upon this question in the agricultural rooms this afternoon, by our friend, Mr. Leland, of Eau Claire. It was one of the most magnificent papers I ever heard. It only shows that a most able production can be written on the wrong side of a question. This gentleman said, or at least the inference was, that individual enterprise should supply the money for the people. I thought I saw what he desired. He is a banker. I don't blame him. If they can have the privilege of issuing five, ten, or fifteen dollars in paper, which is their faith and credit, for every dollar they have in their vaults in gold, it is as good a thing as they want. I would like to go to farming again, if I could farm on the basis this gentleman desires to bank. It is this. If I had a farm worth $10,000 in gold, I would like to have the privilege of issuing fifty thousand dollars in paper on that farm, and lend it to you, Mr. President, and others, at ten per cent. It would be as good farming as I want. There is no earthly reason can be given why I should not do that, except this—it is not quite so easily convertible as the gold. The cases are parallel in their honesty; they are parallel in their justice. They are both a fraud, a cheat, and a lie upon the face of them.

Mr. SMITH: When would you have your bonds payable?

Secretary FIELD: I would have them payable whenever the government agrees to pay them. I heard it said with sorrow this afternoon, that the greenback men never proposed to pay these obligations. I don't know that we ever had an obligation of this government which was repudiated. We haven't yet agreed to pay the greenbacks; when we do, they will be paid in good faith. I would have these bonds on so long time that I think we could accumulate the gold, and I would resume specie payments when we can; not attempt to resume when it is impossible. I would have the greenbacks convertable into a gold bond, bearing gold interest,

Digitized by Google

and payable in gold, when the government agrees to pay them, say ten to fifty years. I have no doubt the business of the country could be adjusted to it in that time, so as to pay them in gold as well as pay them in greenbacks, pork, hogs, wheat, or other surplus products.

Hon. I. C. SLOAN: Do you propose to increase the present volume of the currency?

Secretary FIELD: I would favor contracting and expanding the currency by the convertible and re-convertible plan proposed, so as all times to meet the demands of trade and commerce.

Mr. SLOAN: What do you think the desire is now?

Secretary FIELD: I think there is no desire for inflation, but to have an elastic, self-regulating currency.

Mr. SLOAN: Would you expect the volume to increase before specie payment would be resumed by the government?

Secretary FIELD: I would expect the amount of gold to be increased.

Mr. SLOAN: Would you expect paper-money to be increased beyond its present volume?

Secretary FIELD: Not unless the needs of trade demanded it.

Mr. SLOAN: While our currency is not redeemable in coin, would you favor at any time, and under any circumstances, the increase of the currency?

Secretary FIELD: As I said before, I can only answer it in this way; I should increase it if the interest of trade and commerce demanded it, then I would contract it as the demand ceased. What the gentleman from Eau Claire desires, for I think I can see that plain enough in his remarks, is that when we can get rid of the greenbacks and the national currency, we will call upon the government to allow us to issue currency as it used to. I suppose many of you know how that was, but for fear that some of you have forgotton I have a little bit of history that I will read to you, and I got it from the county treasurer's office, of Dane county, the other day. It is the uncurrent money-list of C. Kloch & Co., of Chicago, January 25, 1858. They give a list of more than forty banks in the following States, Maine, Vermont, Massachusetts, Rhode Island, North Carolina, South Carolina, Georgia, Ohio, Indiana, Illinois, Tennessee, and Michigan. What do you suppose that money was worth at that time? It was worth all the way from five

Digitized by Google

to seventy-five cents. I have taken two banks from each of those States, and the highest that that money was worth, in this market, at that time, for which you traded off your beef and pork, was seventy-five cents, and some of that money was not worth but five cents. The average of all those banks was worth twenty cents on the dollar and no more. Was that based on gold? Gentlemen would rise here and say that that money was based on State stocks. But what were State stocks based upon? They were based upon gold. Still it was not worth but twenty cents on the dollar. Some of the productive industries of this country, or all combined, lost the other eighty cents. I guarantee the banks did'nt lose much. When you did'nt want gold you could get it; when you did you couldn't get it. They are not going to let gold go out of their pockets. When this war began, Secretary Chase called on the bankers for gold to carry on the war. They said not one dollar in gold. They would lend their credit, but the gold crept away like a thief in the night; it was not to be seen. Secretary Chase said they did'nt want private credit, it was gold they wanted. The government supplied their credit; they issued these little bonds called greenbacks; bonds of credit of this great government, and they have been circulating ever since, and I trust to God they will circulate while I live.

Mr. SELLERS: If Uncle Sam makes these greenbacks, and all his boys and all his girls sanction it, why do you want to pay them in ten or fifty years?

Secretary FIELD: I think by that time they won't want anything else for money.

Mr. SELLERS: Uncle Sam takes a paper dyed green, and puts a stamp on it, and says it is worth a dollar, and the boys and girls say it is worth a dollar. What do they want them paid for? Why do you want them paid in ten or fifty years?

Secretary FIELD: Simply to satisfy the people of this country until they more fully comprehend this currency question.

Mr. SELLERS: I went over to Canada a little while ago, and one of my nephews gave me a two-dollar gold piece. I had it in my pocket for over two months, and showed it to several people; they didn't want to look at it. I asked them if they wanted to give me ten per cent. for it; they said greenbacks were just as good. I brought

Digitized by Google

a little silver too, and tried to sell it to the boys; they said a fifty-cent greenback was just as good as a piece of silver.

Secretary FIELD: I doubt not the time will come, and in the not-distant future, when all say we don't want the gold, and it will be relegated to the historical society, or some other society to show the age of fraud in our monetary laws. When our exports exceed our imports we can have the gold in the treasury, and if any one wants the gold I want him to have it. We can pay in it then as well as in other products.

Mr. SELLERS: I want to ask you how you are going to get this information throughout this great State. My idea is, that we want to educate ourselves and our children on this subject. If the greenback question is the right question, we can not begin to educate ourselves too soon. In the temperance movement, my friend says you ought to have a law passed to prevent the sale of alcoholic liquors as a beverage. I say laws are of no effect unless the people are educated to carry them out. My idea in this matter is simply this: Uncle Sam says that a piece of green paper is worth a dollar, and puts the stamp of the nation upon it, and it is just as good to me as if he stamped so much gold and should say it is worth so much. If that is the correct theory, let us set down about our fire-side, or about our domestic alter, and talk about this matter, as God commanded Moses to educate the people of Israel, that they might understand and comprehend the law. Post it upon the door-posts, if necessary, so that they might read it whenever they came out and came in. We should educate ourselves upon this subject. In a gathering here the other day some of our friends wanted to organize a greenback-party. I thought it was not time to do it. We are not educated enough upon the matter. How can these men who have amassed such great fortunes get so much money unless some one else loses it? How can Vanderbilt, in the city of New York, make, in from half an hour to one day, ten millions of dollars, if some poor, unfortunate man did not lose it?

Finance is the great question we ought to settle for ourselves, in my judgment. I don't stand up here to dictate to any man, nor to give [my principles as a basis for any one; I only throw out my ideas. Let us think upon them, and act upon them. This is my theory. I believe if Uncle Sam says a piece of paper, printed green or red, is worth a dollar, and gives it his sanction, it is just

Digitized by Google

as good to me as a gold dollar. We want a basis that will be good when we go to bed at night, and will be good when we get up in the morning, and will be good in a week, or good in a year, and that is good for myself and my children.

Mr. SLOAN: I don't want to occupy the attention of the audience at all, and the questions I put to Mr. Field were simply to this object. I came up for the purpose of acquiring information.

First. I desired to understand whether the speaker was in favor of increasing the volume of the irredeemable currency issued by this government.

Second. Whether it was at some time, and if so, at what time, to resume specie payment, and whether it was thought that it was possible to have a currency in this country which would possess value, and be regarded as representing money which was never to redeemed in full; whether it was, as the speaker last on the floor remarked, that the government of the United States, or any other government on the face of the earth, by simply stamping on a piece of paper, that that is a dollar, could make it worth a dollar, so that it would pass current and take the place of a real dollar. I am not enlightened as yet upon these issues. If it is claimed that by merely stamping upon a piece of paper which can never be converted into any thing different, but simply a piece of paper, spoiled by writing on, that that makes money; that the government can make money in that way, then I think the government of the United States is very remiss and stupid if it does not, in the course of six months, make us all rich, for money can be made in that way very easily.

Secretary FIELD: I would ask the gentlemen if he supposes, however much money the government of the United States makes, that it will give him or me a dollar of it unless we give in exchange a dollar's worth of labor, or a dollar's worth of products of some kind.

Mr. SLOAN: Why not? If the government can make money by simply printing a dollar upon it, why not distribute it and have distributing offices established through the country? If we can make currency and distribute it to every man in some proper ratio; if we can have a money based upon the faith and credit of this country, and it is an inexhausitible capital, we can be the richest people on the face of the earth, only put the government printing-

Digitized by Google

presses to work. Now, there is something in faith and confidence, I recognize. I do not intend to discuss this financial question. I do not feel myself at all adequate to do it, because I do not think that I myself, or any private banker, by giving a printed promise to pay, which would sell at 88 cents on the dollar, make it of any value if we do not propose to redeem it until fifteen or twenty years, or until we take a notion. The paper money of the United States is now worth 88 cents on the dollar, because the people of this country have faith and confidence in the government, and in my judgment, they will, within some reasonable time, when it can be done without too much disaster and evil conseqnences to the business of this country, redeem in coin or in some commodity which the human family can use which is equivalent in intrinsic value with any coin. It is true, gold and silver is of itself a mere commodity. There is nothing of value except that which is wrought out by labor and which is fitted by human exertion for the uses of the human family, to wear, or eat, or drink, or to put to some use. It seems to me, Mr. President, that the greatest snare and illusion that sensible men ever indulged in is, that mere bits of paper, redeemable in nothing, convertible into nothing, that is not of use to man, can, for any considerable leugth of time, be regarded as current money, or be regarded as possessing value which will give it any sort of currency in trade or in commerce. And it seems to me that this greenback theory is a sort of mental disease, and it would be exceedingly unfortunate for the State, if it should become epidemic throughout the State. I am not prepared to say that the government should resume specie-payment in 1879, or within perhaps five years of that period. I am not prepared to say what effect it might have upon the business and prosperity of this country, but I do think that we should keep steadily in view that we are coming back to specie-payment and resumption as soon as it is possible, without creating too great evil in this country, and I should regard inflation and an increase of the currency one of the greatest calamities which could befall the people, because every million of dollars that is added to the currency in my judgment, would postpone that time when the value of the currency circulating among us should be really what it represents; a thing of value, real, intrinsic value, because it is convertible into some commodity or coin, that we can



Digitized by Google

buy any commodity with that we please; some commodity which we can use and which possesses intrinsic value.

Mr. MAIN: I wish to ask the gentleman if he doubts the ability of the government to stamp paper, and give it value? Do not our bonds, to-day, sell for a premium over gold? If the greenback was convertible into bonds, as was the understanding and agreement at the time it was issued, we, to-day, would see that the greenback would command a premium over gold. If Congress, and the men at Washington who claim they wish to raise the value of the greenback, would at once restore the law under which it was issued, which contained the bargain or contract that it should be exchangeable for 5-20 bonds, at the option of the holder, we would see the greenback, to-day, at a premium over gold. Now, I do not doubt but that the government can make the greenback bring more in the market than gold. If, to-day, it was convertible into 5-20 bonds, it certainly would be so. The gentleman thinks it would be a great injury to us if our currency was increased. The currency of France is about $34 *per capita.* The currency of Germany is $26 *per capita.* The currency of England is $24. The currency of the United States, to-day, does not exceed $12 or $13 *per capita.* Now, if any person thinks we can compete in our business transactions with nations whose currency is so much in excees of our own, they think what I do not believe.

I ask if there is anything unreasonable in the greenback, and convertible and reconvertible plan? Is any wrong going to be done to any single individual or any institution by the government's giving its note, bearing no interest, for its note, bearing interest? There is nothing proposed further, than that a person who holds those notes, bearing no interest, shall have the privilege of carrying them back and asking for his bonds again. It seems to me that none of our financial sharpers would consider they were wronged. To make it a little plainer; I will suppose that you owe me a thousand-dollar note, bearing 3.65 per cent; I come to you, and say: I have your note for one thousand dollars; it bears 3.65 per cent. interest. Now, I ask you to take up that note, and give me ten one hundred-dollar notes, bearing no interest. Would you think I proposed to wrong you? I think you would not; even if we agreed, that whenever I had used those ten notes as long as I wanted to, I could return them, and take the one-thousand-dollar-note back.

Digitized by Google

QUESTION: In 1864, the 20th day of June, I was in the city of New York. It took two dollars in greenbacks on that day to buy one dollar in gold. In the fall of 1866 my oats were worth sixty cents in greenbacks. Now you can get a dollar in greenbacks for about eighty cents in gold; a bushel of oats is worth about thirty cents now. I want to know why it is the greenback is worth so much more to-day than it was in 1864, when it was stamped by the government just the same as it is to-day. There must be some reason for that.

Mr. BENTON: The gentleman on my left appeared very valiant. He set up a man of straw, and dealt blows about valiently, and made the straw fly. It shows no logical acumen. Having built a fort of his own, he knows the weak points, and can batter away at them. The question how are you going to regulate the volume of the currency? First. He wants a currency that is not worth anything. I don't know how much knowledge it shows for a man to propose such a thing as that. If he will tell me how he can inflate gold, I would like to know it. He spoke about the inflation of greenbacks. I ask him about the inflation of gold currency. I ask can we inflate a pure gold currency? Can we inflate anything of real value? Is there an inflation of hats and caps? Is there an inflation of horses? Suppose we enlighten the gentleman on this matter? Congress has passed a law authorizing and fixing the issue of fractional currency at $50,000,000. Of course, according to the gentleman's theory, we would all rush for that and take it away. Of course, if Congress authorized $500,000,000, we would all rush and get it. The facts of the case are, Congress did authorize and print that amount of $50,000,000 of fractional currency, but the people never wanted but $42,500,000 of it, and the rest remains there. Why do they not want it? Why do not the necessities of the people of the United States demand any more than that? Why, if I get any more small currency in my drawer than I need, I take it and get a five-dollar greenback. It is more convenient for me. If I have not enough of it I take a five-dollar greenback out of my pocket, and go and buy five dollars of fractional currency. Why do we not go and get the balance of the fifty millions? Simply because we do not want it. If a man has a pasture that feeds five cows wouldn't he be foolish to go and put another one in? The government might print this house full of

Digitized by Google

greenbacks, and we wouldn't get any more than just what we wanted. We would have to give them a dollar for them. If we thought a greenback was worth a little more than what we had, we would buy the greenback. If we considered a horse worth more than a cow, we would sell the cow and buy the horse. I do not want any more. I cannot afford to have it. That is the way we would regulate the volume of the currency. We think the people have common sense. We do not want Congress to regulate it, and say there shall be so much and no more. It is no business of Congress how many horses I have on my farm. It is their business to give me an opportunity to get what I wish. That is what we propose to have them do; to relegate back to the people their power, and not to interfere in this matter. When we trade, we trade as we want to. We do not want a legislative act to limit trade. If I understand the gentleman, he thinks there are a few heads in Washington that have more sense than all the United States; hence, they shall fix the volume of currency.

Mr. SLOAN: How do you propose to regulate the currency? In prosperous times the government will put out a large quantity. The people will want say eight hundred millions.

Mr. BENTON: You can't say anything about it. They would buy all the money they wanted of the government.

Mr. SLOAN: The people sometimes would use more than at others. How are you going to regulate it?

Mr. BENTON: That was the point discussed. When they want more currency they can exchange their bonds for it.

Mr. SLOAN: What would you pay the interest on the bonds with, currency or coin?

Mr. BENTON: Just what is wanted. It would not make a particle of difference under our system whether they were paid in greenbacks or gold, because greenbacks would be equivalent to gold.

Mr. ANDERSON: I would like to ask Mr. Sloan a few questions, whether he would like to further contract the currency for the purpose of resuming specie payments.

Mr. SLOAN: I said I was not prepared to speak upon this subject. If I were to have the choosing between contraction and expansion I would take contraction very quickly.

Mr. ANDERSON: Contraction is an evil. In 1865, with double the

Digitized by Google

circulation that we have to-day, the commercial failures in this country only numbered five hundred, and the total sum of the failures only about $5,000,000. Just so fast as our currency was contracted, just so fast it has shown itself by the commercial failures. That from year to year the failures were greater as the currency was contracted down to the year 1874, when the commercial failures amounted to over five thousand, in place of five hundred, nine years previous, and the total amount was $200,000,000. I hold the contraction of our currency has crippled every industry in this country. I hold there is not a farmer in this country who has prayed for the redemption of greenbacks in gold. It is the drones that want the redemption, and not the industrial or productive classes of the country. Talk about the redemption of greenbacks! I have been redeeming greenbacks for twelve years with all the produce I have raised on my farm. I have been trading for them. That is a better redemption than gold ever was, or silver ever was. These drones in the hive of industry, who produce nothing, but live off of that which is produced by the labor of the country, work hard for redemption, because they can buy more with one dollar than they otherwise could with two. Those are the reasons why they want to make money more valuable. We have heard a great deal about this gold convertible bond. I hold that this United States government, with all the property, is much better than the specie in any man's bank as a basis. I hold the government of this country is a good basis. I hold the national bank currency is better than any State bank currency.

Mr. BARLAND: There is one aspect of this greenback-question that I would like to see illustrated a little. While the greenback-party, as I understand them, agree with the specie-payment men as to the desirability of a gold basis for a currency, they seem to differ as to the means by which this object is to be obtained. The farmer, the producer, sees, by the process which is urged by the immediate resumptionist, a process of ruin and contraction which will involve the ruin of every producer immediately. I wish to urge, right here, that this country is a country of such resources, such spirit, such enterprise that there is no necessity of involving the country in a Bull-Run panic to get to specie payments. Why cannot the country go steadfastly, in its great strength and wealth; go in the consciousness of that strength, steadily, calmly, quietly,

Digitized by Google

to specie payments? It can be done. As to the means to that end, we propose a greenback-issue in place of the national bank system. And why? Because it is impossible to resume specie payments as long as we have such a volume of interest to pay to foreign countries, which interest is payable in gold. There is no reason why this country should not carry our national debt. If this country carries our national debt, there is no difficulty to return to specie payments. We will say that $800,000,000 is necessary to do the business of the country. I ask, is not that a large portion of our public debt? Is that amount to be scoffed at as nothing? We issue the greenbacks for that amount, and the people carry them gladly. Not one cent of interest does the government have to pay on that $800,000,000, which at present it does pay. They are relieved of the burden of paying that amount of interest. Let the government proceed to take such measures as to draw in the balance of our bonds in foreign countries. Adopt such a policy that these bonds will come back to this country, and be owned in this country. Let the interest be payable in greenbacks. Stop this gold interest, and then let the people get themselves upon their feet.

When the country is prostrated; staggering under financial depression; when the laboring man cannot get work; when mechanics all over the country are hearing their chidren asking for bread which they cannot furnish, except by borrowing or begging; it is a shame for the capitalists of the country to demand that we now return to specie payments. Is this generation, that fought out the war of the rebellion to bear the whole burden? With the great elevation our country has assumed, strong in every element of greatness, is it unreasonable to ask that we should have extensive credit? That is all we propose—an extensive credit; and I say the farmer or the business-man, having ten thousand dollars, because he has a note coming due at the bank which he cannot meet, should not sit down like a craven coward and fear to ask an extension, but would rather see his property all sacrificed, and his family ruined, because he dare not ask it. Let that idea be followed up. We are only in infancy in this greenback-movement. We are only suggesting. Let us study the subject. I would suggest one thing further, and it is this, that it is a false assumption to say that the prostration of the country results from a depreciated currency. I think if we examine the causes of the present depression of the country, that we

Digitized by Google

will come to the conclusion that such is not the case. How much is the currency depreciated? Twelve cents on the dollar. Is it not enough to account for that, in the fact that the government itself discredits it? Is it any wonder that with that discredit thrown upon it that it is depreciated that much? Our trouble arises not from a depreciated currency. It would not be helped by specie payments. The depression in this country arises from the fact that capital has not been allowed in this country to run in legitimate channels. It has been used in schemes, interfering with the laws of trade. The vast railroad speculations have drawn capital from the legitimate channels, and have taken the capital from the farmers; that is the cause of the depression. Business has run in illegitimate channels and so we are laboring under depression. If you return to specie payment to day, what does it mean? If you have $800,000,000 of gold before you return to specie payments it is simply resolving yourself rich when you are not. We must use the credit of the government and make wealth, and then we are ready to resume. Let it come by natural causes.

Colonel MAY: I have lived long enough to pass through a period of three currencies. I have seen the working of the greenback system, and believe it is the best of the three. No individual can say that he has ever lost a dollar in greenbacks, but can you say so much in reference to the State banks, when you had the State banking system, secured by stocks. When there was specie payment how long did it remain so. Just long enough for the banks to get into circulation, three, five, or ten dollars to one they had on deposit of gold and silver, and so soon as that was brought about there was a panic sprung in the country. Suspension was the result, and when suspension came, under the State banking system, how much were the State bank notes worth? You might have your pockets full this evening, and in the morning you couldn't buy your breakfast with them. Who has ever lost a dollar since the greenback system has been in use? No one. Why then do you want to get rid of it? Why desire to get out of circulation the greenback currency, if it is so good and so nearly par with gold and silver. Why resume specie payment? I have asked men that question. I am not prepared to answer it, and no individual to-day is prepared to answer it to my satifaction. Why should we prepare to resume specie payment while we have a currency that answers our purpose?

Digitized by Google

I see some individuals desire to return to a specie basis. It is because the capitalists have not been able to make the amount of money out of the greenbacks, that they did out of the other currency.

The banks should be satisfied with the present mode of speculating. They are only required to deposit with the treasurer of the United States, ten thousand dollars in bonds, and the treasurer issues to them nine thousand dollars in national bank currency, upon which they may bank, and at the same time they draw their regular six per cent. interest in gold, semi-annually. Should they not be satisfied with such a system as that; such a speculation as that? But they ask more; they ask that the United States currency; the greenbacks, be taken out of circulation, and instituted instead thereof a depreciated currency of their own issue, the same as they had under the State bank system. That is where we are drifting The national bank system is one step toward the old State bank system. When we pass from the new banking system to the old State bank system, then the issue becomes five or ten dollars to one of gold or silver to redeem it with. When the bank breaks, who loses the money? Is it the stockholder? He loses his stock and nothing further. His property, his land, or his capital, that he has invested in other enterprises, are none of them touched.

Mr. PASHLEY: In 1860 I had one hundred bushels of wheat which I sold for $100. I got a depreciated bill for $5, which left me $95 for my wheat.

Colonel MAY: Supply and demand has always regulated the prices of commodities. Beef, pork, or wheat, when there is a scarcity, always demand a higher price. When there is a surplus they bring a lower price.

Mr. PASHLEY: Suppose I sell a hundred dollars worth and lose five dollars by getting bad money, how then?

Mr. ROBERTS: I take it that it is the promise to pay a dollar that gives the greenback its value.

Mr. PASHLEY: It is its being a legal tender that gives it its value. It is not the promise to pay.

Mr. ROBERTS: I disagree with the gentlemen entirely. I say it is the promise to pay that gives it its value. That promise is backed by forty-five million of people, as has been stated here,

Digitized by Google

and by thirty billions of wealth which makes it good. The legal-tender feature of it may increase the value of it in one sense.

Mr. PASHLEY: It is the only thing which gives it its value.

Mr. SELLERS: What gives your twenty-three grains of gold its value and makes it a dollar?

Mr. ROBERTS: It is because it will always exchange, in this country and every other country on the globe, for a dollar's worth of produce of any kind.

Mr. SELLERS: It would not, any more than a piece of paper, if the governments of the world didn't say it would.

Mr. ROBERTS: Yes, sir, it would. The governments of the world cannot create value. Value is created by labor—yours and my labor. It is impossible to make a piece of paper of any value. It is not of any more value than what it cost to make the paper and print it. That is all the value there is inherent in the piece of paper.

Mr. SELLERS: What is it that makes gold more valuable than iron?

Mr. ROBERTS: It is the labor it costs to get it out of the earth. Any one engaged in mining iron can mine that iron and get it ready for market for five or six cents a pound.

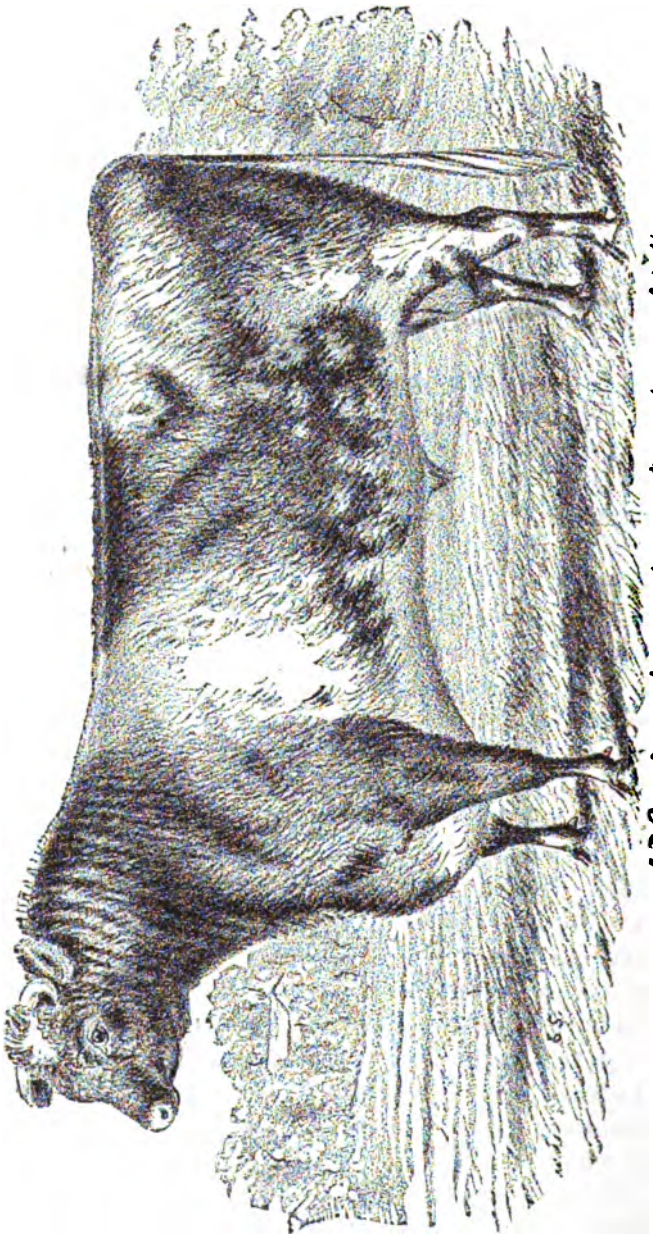
Mr. SELLERS: What gives it its legal value?

Mr. ROBERTS: There is no such thing as legal value. You can mine and put into market a pound of iron for five or six cents. Can you mine and put into the market of the world a pound of gold for five or six cents? I should think any man could see the difference in the value, and in the cost. It is labor that makes any thing of that kind valuable. It is the promise to pay on the greenback, and the promise to pay it in gold, that makes the greenback valuable. It is the obligation of the United States.

Secretary FIELD: I wish to say to the gentleman, that he nor any other person has a greenback, but what, if he came by it honestly, has cost him just as much labor as to obtain the gold dollar. Neither can be had except in exchange for labor or other things of value.

On motion, the convention adjourned until 9 o'clock, Thursday morning.

Digitized by Google



12343, Loudon Duke 11th,

Property of ELI STILSON, Oshkosh, Wisconsin.

Digitized by Google

*THURSDAY, 9 A. M.*

Convention called to order by President Stilson, and a paper read on

## BUTTER-MAKING AND THE CARE OF COWS.

BY F. C. CURTIS, ROCKY RUN.

Statistics and well-founded estimates give 13,000,000 as the number of cows in the United States. About fifty-four per cent. of their product is presumed to be used for butter; making an annual product of 1,402,000,000 pounds, which at an average value of 30 cents per pound, amounts to $420,600,000. The Wisconsin farmer will doubtless say this estimate is too high; that he never realizes more than 30 cents per pound, and often but one-half that amount. A late price-current of the Milwaukee markets, by M. Stewart & Co., informs us that the price of butter was from 15 to 25 cents. "Shipping-grades dull and lower; prime, scarce and wanted." These market-reports do not contain the exact facts; true, doubtless, as far as reported, for I know from experience that a good article of butter often sells for five cents per pound above quotations, while grease-butter sells far below. Butter made in the eastern States is quoted in the New York market at a much higher price and averages more equal in value.

The question naturally arises why this inequality of price? In endeavoring to solve this question, and to give instruction as to a better mode of making and marketing butter, I shall address myself mostly to the farm-diaries, or those who keep a small number of cows, for the reason that here is where the great bulk of the butter comes from, and here is the greatest room for improvement, for factories, creameries, and those keeping a large dairy, are able to inform themselves and adopt improvements which are beyond the reach of the more numerous and less favored classes. Generally speaking, I am opposed to special farming, and cannot heartily discuss any subject connected with farming that has not a general tendency to improve the farm, as well as secure a safe and adequate return for the labor and capital expended. Good butter can be made only from good cows, well fed and comfortably provided for, with an equable temperature of about sixty, for the milk and cream, during its manipulation, skill and vigilance in do-

Digitized by Google

ing everything at the right time, good salt for seasoning and preserving, and above all, strict cleanliness must be observed during the entire process.

The majority of our cows are profitable, if well kept, though occasionally there is an extra good one; when such an one is found, take extra care of, and keep her; turn off the unprofitable ones for beef, which will require but a little extra feed and attention if you have done your duty in giving them a fair trial for the dairy. Save the heifer-calves from your best cows and sire; those posessing the best milking qualities. To test the quality of milk, I have glass vessels about the size of a common candle, six inches long and standing upon end; these I fill with milk, and if, with a fair trial, the cream rises five-eighths of an inch in thickness, which can easily be seen through the glass and measured, I call the cow producing it a passably good one; if less than one-half inch, I discard her. I have a cow at this time which gives an average of thirty pounds a day, whose milk by this test raises seven-eighths of an inch in thickness, and I doubt not makes ten pounds of butter per week. She came in about two months ago; her appearance would indicate a dash of Short-Horn blood; good size, good appetite, and good digestion. I consider her product extra, considering her allowance of feed, which is daily about six quarts of bran, one pailful of carrots, two pailsful of ears of corn, and all the clover and timothy-hay she will eat, with an occasional change of corn-stalks and corn-fodder, raised specialy for forage. I have no personal knowledge of the Alderney and Ayershire or other commended breeds for the dairy only as seen at the fairs. To those having the conveniences a trial would seem advisable.

Cows should be protected from the inclemency of the weather, in warm, dry, well-ventilated stables, and right here is where strict cleanliness should commence. Eastern writers lay great stress upon this point, and are particular to urge washing the udder before milking. I would say by all means wash if necessary, and I often do it, but in Wisconsin, where straw is in such abundance and cheap, which if used liberally renders washing unnecessary—all that is wanted is a free use of the card and brush, which removes all extraneous substances, and is much more acceptable to the cow. My stable is in a stone building forty by fifty; its side-walls are thirty feet high, its basement is about one-half under ground, one-sixth of

Digitized by Google

which is for the storage of roots, the balance has a concave bottom and has been tramped so hard that it is now water-tight; this is used for manure, hogs and young cattle have access to it in winter, also the cows find it a cool retreat and freedom from most insects in summer. One-sixth of the second story is a granary, the balance stabling. The third story is used for storage. Cows are much easier confined and handled in the stanchion than any other plan I have seen. To remove the droppings a plank is raised back of the cows and its removal is easily accomplished. I then add a generous bedding of dry straw, which seems to absorb the stable-smell effectually, as well as makes the cows comfortable, and lightens the further task of cleansing and milking the cow. Should I forsee a scarcity of straw, I should lay in a supply of dry peat or muck which abounds in our creek-bottoms and marshes, for the purpose of absorbing the liquids and foul odors of the stable. Dry substances in sufficient quantities have an astonishing effect in absorbing any foul odor. It will be noticed that a stable having perfect drainage, has an advantage in that respect over any other plan I have seen—economizing all the droppings of the cows, and at the same time it is sufficiently warm in the coldest weather to milk and attend to the cows in comfort.

I am not so particular as to what I feed my cows as long as they have enough, and that which is sufficiently nutritious to keep them in good flesh. I will however drop a few words as to what I consider their best food. Grass, first in the spring, as soon as they can get a bite, and dry grass, bran, and meal in addition, until they get to full feed. I have tried to cultivate no other grasses but timothy and clover. These I know to be good, though when clover is wholly used, some buyers of butter complain that the texture of the butter is softer and the flavor not as fine as when part timothy and other grasses are used for pasturage. On the other hand, the records show that one of the first premiums for butter at the New York State Fair of 1873, was made from cows pastured upon clover. This accords with my experience. At our State Fair of 1874, one of the judges of butter told me my June-butter was made from cows feeding upon clover; this was a little startling to me, for the gentleman was from New York and could have no other knowledge on the subject than what he obtained from an examination of the butter. He also told me that my September-butter was made from

Digitized by Google

cows that were falling off in flesh—not full-fed—a fact I was reluctantly obliged to concede; he also stated that he could tell whether the cows were furnished with good or bad water. I refer to these matters to show butter-makers that the dealers in that article are sharp, and if we wish to get good prices we must attend to our business. Unexpected drouths shorten the grass. To meet this short feed we should raise a liberal amount of corn exclusively for fodder. I raised upon the following plan four acres of corn last year and it gave excellent satisfaction. I marked out, on fall-plowing, with a shovel-plow, three feet apart, dropped the seed in the furrows rather thick by hand, and covered it with a cultivator by going crosswise; harrowed it well just as it was coming up, and then again about a week afterwards. I went through it once in the row when about six inches high with the single shovel-plow. I have tried broad-cast sowing, but do not like it as well; it is apt to break down and rot; it is better in drills, so that it can be worked. This crop will be found excellent for soiling when pasturage becomes short by drouth or otherwise, and that which is not used for that purpose can be cut with a self-raking reaper, or otherwise, and will be good any time; don't cut too soon; let the little ears begin to harden. Pumpkins for September and October are excellent feed; then for November, December, and January too many carrots cannot well be stored, and sugar-beets and mangolds, which keep better for the later dry-food season. Roots are good as an appetizer and aid to digestion as well as having intrinsic value in themthelves, and are very desirable for cows about to come in.

I often read that corn is too heating for milch-cows, but I am not afraid to warm up mine by that method, always feeding it upon a full stomach; then but little will pass off undigested, and that little the pigs and fowls utilize. Bran is good feed, and I use it more liberally with cows inclined to fat, but when so used, the cow must be otherwise well fed or you cannot avoid drawing your cow into the milk-pail. Raise all the corn you can, and if possible cut it up. If all the corn raised in our State was cut up, I think there would be less loss from chintz-bugs, Shocked-corn is an enticing retreat of this pest for winter quarters, and feeding it out after husking or otherwise, insures their destruction. Shocked corn is good for out-door feeding, but its bulkiness and our deep snows make this kind of feeding of doubtful policy. Our

Digitized by Google

main dependance for winter-feeding must be hay, timothy and clover, and it should not be over-ripe when cut. With good stabling and stores of food as I have described, which are within the reach of most farmers, if not all, good butter can be made through the cold part of the season, provided artificial heat can be provided while the cream rises. Those who can not provide these requisites had better not undertake winter-dairying, but those who can will get better prices for their product. I have tried it in part, and am so well pleased with the result that I shall change the time of my cows coming in as near to the first of September as possible. True there is more work in providing and handling the feed of the cows, but the market for butter is much better, and I can supply artificial heat better in winter than artificial cold in summer. My milk-room, during the temperate and cold season, joins our dining-room, and is warmed and kept as near a temperature of sixty degrees as possible by a stove in the dining-room. The room is in the northwest corner of the house, with a large double window on the north, with an outside blind. The walls of the building are of thick stone. These conveniences, properly managed, insures the temperature indicated for a larger portion of the year. In the hot season we remove our milk to the cellar, which has previously undergone the most thorough cleansing and whitewashing. A thermometer is of great value in keeping the cellar at the right temperature. If the weather is too cold, close doors and windows. If too warm, the same rules will apply. The deeper the cellar, the more uniform the temperature can be kept. Milk should not be set on the bottom of the cellar, as it is the coldest part, hence the dampest. Milk should not be set lower than four feet above the bottom of the cellar. As long as the temperature does not exceed sixty-five degrees good butter can be made. When warmer than this, a little advantage can be gained by lowering the cream into the well for preservation and tempering for churning, but the milk will sour before the cream all rises, hence loss will ensue.

Under the head of milking but little need be said. Kind and gentle treatment in milking, and to be done by the same person, at regular intervals of twelve hours as near as practicable, should be the custom. The milk, if drawn in the stable, should be removed as soon as possible, strained and set at rest, not to be disturbed until skimmed. This is the better rule in all cases, but particularly

Digitized by Google

so where foul odors or a suspicion of them exist. We use the common tin milk-pan, and fill as full as they can well be handled. I find by repeated trials with my glass vessel that the cream rises in proportion to the depth of the milk. Here appears to be the point where I should say something again about cleanliness, but my associations have been such that I have not been called upon to attend to it personally, but I have been reading for more than an average life-time that every vessel used must be scalded as often as used, and placed in the sun as often as practicable; that all spilled milk must be removed from floors, etc., as soon as possible, or it will sour and have an injurious effect. Anything further on this point to me seems superfluous. We design to keep the temperature of our milk-room at sixty degrees, at which point the milk will be ready for skimming from thirty-six to forty-eight hours. If the room is below that temperature the cream may become bitter before all rises, or white specks may show on the cream. When this is the case, skim at once. There seems to be much mystery about the characteristics of cream in churning. At one time butter comes quickly, is soft and white—cause, too warm. At another time it is frothy, and almost impossible to produce butter—cause, sour cream and too cold. At other times a salvey mass with buttermilk intermixed is the product, which no after-manipulation can work into butter—probable cause, too rapid churning in some lightning-improved patent churn.

Right here, I desire to say I have been largely victimized by investing in patent churns, resulting, of course, in a return to the old dasher-churn. At the State Fair of 1873 I was the fortunate recipient of a churn called Whipple's Rectangular, as a premium on butter, from the Society. After a short trial we concluded it was too long in churning and set it one side; the following spring we tried it again—we have used no other churn since. Its qualities are ease in churning, extra quality of butter made, its capacity of freeing the butter from the milk, and we find it churns soon enough and that no cream rises upon the buttermilk, from which we infer that it makes more butter from the cream than many other churns. It is also easily kept sweet and clean. Cream may become slightly acid before churning without injurious effect. The length of time it may be kept before churning depends upon the temperature. If it has been kept at a nearly uniform tempreature of sixty degrees, it

Digitized by Google

is doubtless about ripe for churning in three days from milking. Then a little increased warmth is desirable, say sixty-two to sixty-five degrees. When the cream is from cows fed upon dry food about five degrees warmer will be desirable. A slow or moderate motion in churning will produce better butter than a fast one, and requires less work to free the milk from the butter. As soon as the butter has come, the quicker it is freed from the milk, salt added, necessary working completed, and the butter packed, the better.

Right here there is still a difference of opinion as to the best mode. A minority hold that no water should be added to wash the butter, insisting that washing injures the flavor and is unnecessary. The more numerous class hold that the sooner the milk is freed from the butter, with the least working, the better; that the necessary working without washing injures the grain of the butter, and makes it salvey. One thing is very certain: if the butter is over-worked and salvey, and your butter goes to a buyer who is a judge, you will learn the fact at once in the decreased price received. We find from our experience, that when we have kept the milk and cream at the proper temperature, and this in the cool part of the year, but little water is necessary, particularly since we have used the rectangular churn. In this churn we find the butter comes in half an hour to an hour; quick enough. We then draw off the buttermilk, add a quart or two of water, give the churn a few turns, again draw off and take out the butter; work in about three-fourths of an ounce to the pound of Ashton salt; set it away about twelve hours, and, when the salt has mostly dissolved, re-work faithfully with the common hand-ladle, giving it a careful, pressing motion, instead of a drawing one, until the brine and all traces of milk are extracted; then pack in jars or tubs at once. After the working is completed, and the butter has become set, packing, handling, or repacking has an injurious effcet. In warm weather, we use more water in washing the butter, and sometimes we find it necessary to give it two workings after salting. The last working should not be more than twenty-four hours after churning, or the grain of the butter will likely be injured. Fully packing a jar, tub, or firkin from one churning is better, when it can be done. This insures butter all of one color. Jars for long keeping should be new and clean; filled within about an inch of the top; a cloth



Digitized by Google

put over, and then pressed full of fine salt, slightly moistened. Strong brine will answer the same purpose, but whitens the top portion of the butter. When old jars are used, they should be filled with dry earth a few days, then thoroughly cleansed. A little leaven of rancid butter, in some unseen nook of the jar, will soon leaven the whole jar. Good ash or oak firkins, well soaked with strong brine before packing, and headed up, are better than jars for preserving butter. Our custom is to pack in jars, from two to four gallons each, nearly or quite full; fit a piece of thin, white cotton-cloth on the top; sprinkle on a little salt, and bind over the top two thicknesses of brown paper, securing it well with twine. We sell mostly through commission merchants as long as we can get 25 cents and upwards, which usually is until about the middle of June. We then pack in firkins. In about four weeks we find our commission friends calling for butter upon our terms. We then pack in jars. We find our firkin-butter keeps as long as we wish, and is preferred by some to fresh-made. I have sold 2,147 pounds from eleven cows the past year, besides supplying my family, consisting of seven or more persons. I have raised six calves, mostly upon skimmed-milk, and fattened five more to six weeks old. I have raised about 2,400 pounds pork, the growth of one-half of which, I think, may be credited to sour milk. This showing is not quite as good as many claim to have done—not as good as I hope to do the coming year; but still, I am well pleased with the balance-sheet, to say nothing of the evident increased fertility of my farm.

QUESTION: What amount of butter did you make from your cows the past year?

Mr. CURTIS: I produced 2,147 pounds of butter from eleven cows, besides supplying seven persons in the family. I also raised six calves, mostly on skim-milk, and fatted four more.

Mr. BINGHAM: I would like to have Mr. Curtis repeat his test of a good cow.

Mr. CURTIS: I should have said more on some points than I have, but I thought I was taking up too much of the time of the convention, and I shortened it up as much as possible. The majority of our cows are good, if well kept. I do not take so much stock in the fancy breeds as many do; still I do not object to them by any means. I hope all will test it and try the recommended

Digitized by Google

breeds. Save your calves from your good cows and sire. That I consider of great importance. The sire and dam, dairy-breed, should belong to good dairy-stock.

To test the quality of milk. Some cows give a large quantity that is not very rich, some a smaller quantity that is very rich. I have a glass vessel about the size of a candle to test the milk. These are filled with milk; these vessels are about six inches long, and very easily set up on the end by boring holes in a piece of timber. If with a fair trial the cream rises five-eighths of an inch in thickness, the milk being of the depth of six inches, or the length of the vessel, I call her a passably good cow, but if the quantity is less than five-eighths in thickness, I discard her. I have a cow at this time that gives an average of thirty pounds a day, on dry feed, and her milk, by this test, raises cream seven-eighths of an inch in thickness, and sometimes more; and I doubt not, makes ten pounds of butter per week. One of the best features of a cow is a good appetite. I want a cow to eat. I like to have her good size and quality, such as we get in the cross of short-horns with good natives.

Mr. ANDERSON: I would like to ask Mr. Curtis if the amount of cream did not depend considerably on the kind of feed, if you will not get more cream if you feed corn-meal, than if you feed bran.

Mr. CURTIS: Of course.

Mr. ANDERSON: Do you prefer carrots or the sugar-beet?

Mr. CURTIS: I have not tried the sugar-beet in comparison with carrots; I know carrots to be good. There is another product I consider of great importance which I might here allude to in connection with carrots. The orange-carrot I have used. I find some of them are more yellow than others. I notice the eye has a good deal to do in the sale of butter. They want it yellow. Annatto is used for that purpose. Somehow I do not like it; I don't use it at all. But latterly we have learned to take this yellow carrot, and with an ordinary grater, grate up sufficient, say three or four quarts, and let this stand in water, five, six, or ten hours, just what is convenient, and then press out the juice through a strainer, and put this into the cream and churn it. It gives a good color, and we think also adds to the flavor of the butter, because it gives a fresh, grassy taste that our city customers call for, more like June butter.

Digitized by Google

Mr. BENTON: I would like to ask whether the feed of the cow affects the color of the butter?

Mr. CURTIS: I have no doubt it does. I think the reason why butter is white in the winter, is because the grass is too ripe when cut. It is woody.

Mr. BENTON: Would the feeding of corn-meal make yellow butter?

Mr. CURTIS: I think it would.

Mr. BENTON: I am feeding yellow corn this winter, and you can detect it in the color of the butter.

Mr. ANDERSON: I would like to confirm what Mr. Curtis said about cutting hay. We cut our clover very early; when in blossom, and the butter was just as yellow as though the cows were on good pasture.

Mr. ALLEN: I would like to confirm the statement of feeding clover when it is cut green.

Mr. CLARK: I would like to know if you use ice?

Mr. CURTIS: I do not. In preparing this paper, I stated it was designed for a large class of butter-makers, not the heavy class that can procure ice and things of that character.

Mr. CLARK: Many small farmers have ice-houses of their own, and do use it.

Mr. CURTIS: I have a very excellent cellar. I can keep the temperature as prescribed very nearly, seldom, if ever, getting warmer than sixty-five degrees.

QUESTION: I would like to ask, if you ever find any trouble with coloring the butter by carrots, as to its keeping qualities?

Mr. CURTIS: Our butter sells within two or three weeks. There might be trouble if long kept.

QUESTION: I have had trouble in the butter; would not keep sweet and nice-flavored for a great length of time

Mr. BENTON: That raises a point that should be observed in all of these matters; and that is, the introduction of natural processes in the manufacturing of all articles. That is virtually an adulteration, introducing a foreign substance into the butter. The question is, will we not have a better product in all cases to let nature and the laboratory of nature do the work. Introduce no foreign substance of any kind into the butter except your salt. That is the question I would wish to have settled here.

Digitized by Google

President STILSON: I would say, as far as my experience goes, I have never yet seen a man who could detect the cause of the color when carrots were used, the butter appearing like new butter in all respects.

Mr. BENTON: The question is, whether there has been an examination made to ascertain this fact. It has been hinted here that the foreign matter in it did decay. That the butter you spoke of had never been subjected to conditions in which it would be revealed. This is a question of science as well as of experience.

Professor DANIELLS: In regard to ascertaining the quality of the milk, I would say: I think in an ordinary drug-store you can get tubes about six inches long and three-fourths or seven-eighths of an inch in diameter, for about five cents a piece. Any man, by setting them down in a board, can use them for measuring the quality of milk very accurately, so it will be perfectly easy for any man to do this if he chooses. In regard to the use of the sugar-beet Mr. Anderson spoke of, it seems to me sugar-beets must be a most excellent food. I have never had any experience with them. It contains a large amount of sugar. The sugar is in condition to be readily taken up by the system. It contains material the cow wants, and I think it must be much more valuable food than the carrot. It does not contain so much oil as the carrot; so much coloring matter. I think it must be a much more profitable food on the whole, to use the true sugar-beet than the beet that goes by the name of sugar-beet. My opinion is, it is the Lane sugar-beet. A man in Vermont had a beet of the common variety. It is simply a common beet that is unusually sweet. It is not the true sugar-beet, so that all of you who experiment with this and wish to raise sugar-beets, ought to be careful of the seed you get, and get the true Silician sugar-beet. This common variety does not contain saccharinel matter enough to make sugar.

Mr. BOYCE: My experience with raising sugar-beets corresponds exactly with the statement made by Professor Daniells. I have raised the Lane sugar-beet and the White Silician sugar-beet. I consider the White Silician sugar-beet very much the better. I never fed any better root to milch-cows than the White Silician sugar-beet. They are easily cultivated. Most every farmer has a portion of his farm where he can cultivate these sugar-beets, and

Digitized by Google

most decidedly they are the most profitable to raise for feeding stock.

Professor DANIELLS: I would say that we raised eleven tons to the acre at the university farm. The mean was from nine to eleven per cent. saccharine matter in the juice of the beet.

Mr. SMITH: I would like to ask Professor Daniells to state what the proportionate amount in the sugar-beet and the common carrot.

Professor DANIELLS: I cannot tell you. The saccharine matter in the carrot is not large at all. It is larger than in the turnip, but exceedingly small compared with the amount that is in the true Silician beet. I am not able to state the amount.

Mr. FLINT: I would ask if the White Silician sugar-beet is not diminutive; whether it is not absolutely difficult to raise an abundant crop. So far as I have observed this beet, the crop has been poor.

Mr. BOYCE: In regard to the productiveness of the White Silician beet, with me it has been entirely satisfactory, producing quite as well in my ground as the Lane Improved sugar-beet.

Mr. CURTIS: I would inquire if there is not a yellow sugar-beet.

Mr. BOYCE: There is a yellow sugar-beet. It is not a sugar-beet proper. It is called the mangel, sometimes termed yellow sugar-beet; however, it is not in any sense a sugar-beet.

QUESTION: What is the difference between the regular mangel-wurzel and the sugar-beet?

Mr. BOYCE: The mangel-wurzel does not contain much saccharine matter; the White Silician sugar-beet which is cultivated in Europe for the production of sugar, and also in this country to some extent, contains a great deal of saccharine matter, while none can be obtained from the mangels, or the yellow mangel, which is called the yellow sugar-beet.

Mr. WOOD: I am not aware that the amount of sugar contained in the roots is any criterion of value. We are all well aware that it does not find any lodgement in the system. It has to undergo some change. So far as my experience goes, the carrot while it does not contain by analysis so much sugar as the beet, still it would be more valuable for food. We know that corn the most valuable of all does not contain much sugar, yet it possesses fattening properties far above any of these we are speaking of. I am not persuaded at all that the element of sugar is of any special value in a

Digitized by Google

crop for food. So far as the roots raised to the acre, I have had some little experience in reference to that, and have raised both of the Belgium and the yellow carrot as many bushels to the acre as I have been able to raise of either of these sugar-beets, Lane's Imperial sugar-beet and the white sugar-beet. I raised this year from eight to nine hundred bushels to the acre of each of these varieties of beets, and of carrots I raised as much. I know if you leave it to the animals they will prefer the carrots. I know I left it to my hogs. I took out from my cellar beets and carrots and threw them down where the hogs might eat them. They will eat the carrots with great avidity, and then will look up to see if you have more. If they find you have not, they will reluctantly go at the beets. I never got them to eat rutabagas when I was in sight; they looked for more carrots or beets. They always resolutely refused to take them in my presence.

I am satisfied, for fattening purposes, the carrot is far ahead of the other roots. When you come to take into consideration the amount of roots, which is an important element, I have raised the giant mangels which yielded last year nearly sixteen hundred bushels to the acre, nearly double that I could get from any other root; they are a coarse root, too coarse for table-use. I exhibited them at the county fair. People would say, are those good for anything? And I would take a jack-knife and cut out a piece and you could not tell the difference between the taste of them and the sugar-beet. When you come to take into consideration the fact that you have twice the bulk, it would be more economical in raising it. It was certainly more economical in gathering. They grew a foot or fourteen inches above the ground. You go along with a knife and trim off the leaves. Passing along between the rows, it looks like a cedar swamp, an impassable barrier of stumps standing. Then we drove along by the side and picked them up and put them in the wagon. We do not stop to dig the mangles. We can load them as fast as we can drive along, while with the sugar-beet we had to previously dig them, either with a spade or fork. With carrots we could use the plow in digging. In digging the mangel, the whiffletrees would tip them over. The sugar-beet stands up out of the ground. We get along very easily with the carrot, by runing a furrow close to the row of roots, and then tipping them out. A man will run the land-side of the plow next to the roots, so he does not have to

Digitized by Google

dig them. When the furrow is made, a man goes along with a knife, and tops them and picks them up. In that way we get along with the carrot as expeditiously as with the variety of sugar-beet, or those that grow deeper in the grouud than the mangle. My preference is entirely for the large mangels that are raised and gathered with so little labor.

Mr. EATON: Have you got any other evidence that the carrot is better food for hogs than the sugar-beet, except they suit taste better? If not, some other food might still be better than the carrot, such as corn or chickens.

Mr. WOOD: The analysis of the root itself with a careful experiment in feeding would be the only thing that could determine the real value as food. I merely jumped at conclusions.

Mr. EATON: You never tested it?

Mr. WOOD: No, sir.

Professor DANIELLS: If the sugar is not valuable, what portion of the crop is valuable?

Mr. WOOD: The sugar is valuable, but corn or white bread has hardly a trace of sugar, yet it is the heartiest food we can feed.

Professor DANIELLS: The sugar is soluble. It is ready to go into the system of your cow. The system will take care of it. The starchy portion of corn is the principal nutritious portion. It must all be changed in the same form into which sugar goes into the system before the system can take it up. Starch is insoluble. It must be changed just as corn is changed in the corn-syrups that are so common now-a-days. It must be changed into that form called grape-sugar. It is sugar that differs but very little from the chemical combination. It goes into the system in the form sugar does. It is all ready for the animal to take it up and use it in nutrition. I want it to be understood that sugar is food, very nutricious food, very easily digested. It is just what the animal wants.

Mr. WOOD: The elements, by a chemical analysis, of starch and sugar are just the same. I am not prepared to accept the statement that a pound of sugar is equal in value for food to a pound of starch.

Mr. PEFFER: I would like to compare experiments to know the value of the different roots mentioned for food.

Mr. WOOD: I think we may arrive at this simply, by considering which would be the best as human food. The human system

Digitized by Google

will thrive on the most concentrated food. We know that potatoes make good human food. Beets and carrots are rather watery, yet carrots are better human food than beets. A man would thrive and work better on carrots, than on beets. Potatoes are no doubt the best, containing the greatest percentage of starch; if they are valuable above the beet, it is because they contain starch rather than sugar. I think a very good measure of the value of any of those roots, would be the relation in which they stand to the human family; the human system. We all know we can live on potatoes and work, when we could not very well on beets; parsnips are also good food.

Mr. ALLEN: I am a good deal of a clover-fanatic myself; and I commenced a year ago raising beets, thinking to feed them to my cattle. I disregarded it wholly recently, and have adopted clover cut early, very soon after blossoming. That, well cured, comes the nearest to a grass-feed of anything I have been able to find, and will give the best coloring to the butter. It is the best food, nutritious food, that I can find for my cow, excepting corn-meal. If corn-meal is fed to a cow, in connection with clover cut early, and well cured, it is the best.

Mr. SMITH: How much clover did you cut to the acre?

Mr. ALLEN: That depends on how much plaster I put on.

Mr. SMITH: This year.

Mr. ALLEN: Four tons and a half from two cuttings to the acre.

Mr. SMITH: How would the value of that compare with a thousand pounds of beets that could be raised?

Mr. ALLEN: I can raise three acres of clover easier than I can an acre of beets.

Mr. WHITING: This discussion has taken rather a wide range. The most of the questions propounded seem to be rather collateral to the main question in view. I wish to propound another that is still wandering further from the track, but is to me a matter of considerable interest. I made some attempts to raise carrots. I think they are a valuable root. I have been so nearly thwarted on account of weeds, that I have not been very successful in that undertaking. I would like to ask Mr. Wood, or some gentleman of experience in raising carrots, how they succeed in getting them to a sufficient growth, so the weeds would not choke them out, although I believe I took the usual amount of care in guarding

Digitized by Google

against weeds. I found in sowing the carrot-seeds that they remained in the ground a great while. The weeds came up ahead of them and I found it to be a great job to separate the weeds from the carrots, so that the latter would thrive. I want to know how to raise carrots and get them out of the ground soon enough, and keep the weeds away from them, and make some profit.

Mr. WOOD: I can give my own experience. I would say unless a man has a piece of ground that he has already, by previous culture, made free from weeds, and the seeds of weeds, he had better let the roots alone. When I made up my mind to raise carrots, I prepared my ground by at least a year's previous culture. I had a quantity of clover, turned it over, and raised a crop of potatoes upon it first. I gave these potatoes absolutely clean culture. I do not let one weed go to seed. I often plow both in the spring and fall. I do not put in any manure that contains the seeds of weeds. You cannot contend too much with the weeds in raising carrots. You can do better with beets. After I plow the ground in the spring, and make it as deep, and as mealy as I can, I ridge it in narrow ridges. I do this by driving one horse in the furrow, and holding the plow on its land-side, so that each time of going through makes a ridge, and the ridges are thirty inches apart. I have a little wooden harrow made the full width, made out of two-by-four stuff, with wooden teeth, set slanting backwards. I level it off and get all the little lumps off of these ridges. They will roll down into the furrows between the ridges. The ground will be perfectly mealy on the crown of the ridge. I plant them with a drill. The roller that I cover the seed with leaves a little depression so that you can see where the implement has passed along. That has worked very well with me in a dry spring. It will be particularly valuable when it is dry, because that particular streak will be full of moisture; then, when they come up, I am not troubled with weeds. The first culture I give them, I have a common corn-plow, with a rolling-coulter. I put the rolling-coulter on so as to form a perfect shield of the land-side, have a quiet animal, and pass along, holding the plow a little on its lay and I can run it within an inch or two at most, of that straight row of carrots. I hold it a little inclined. It just peals the surface of the ridge and throws it into the hollow. Going up and down them, I thin them out. I thin the first time over it so as not to have a double job; thin them

Digitized by Google

to three or four inches; after that I cultivate with a common cultivator, three diamond teeth set in the cultivator-frame. Then I have drag-teeth in a big frame, made so it can be shut up. I have to shut it up pretty narrow. When I cultivate it the first time with this plow, it leaves the ground level. I have just shaved it off so it left a nice ridge. After that comes the thinning. That is not a very serious job. I was astonished at the ease with which I accomplished it.

Mr. ALLEN: Did you thin with your hand or hoe?

Mr. WOOD: You can thin with a hoe.

QUESTION: I would like to ask Mr. Wood how much of a crop of potatoes he wanders over in going through it to keep it free of the weeds. I am raising potatoes myself and I find it very difficult to keep it free of weeds.

Another question I would like to ask is, the nature of potatoes for food for the human body. In an early day I was once confined to that kind of food; we couldn't get anything else to eat for four days, and it was very thin food.

Mr. EATON: I have been myself heretofore engaged in a diversified husbandry. I am now about to exchange to a certain extent, from agriculture to that of butter-dairying; hence, I am very much interested in anything that can be said about the care and management of cows. I was unfortunately detained this morning and did not hear the very able paper that was read. I am a very small farmer yet. My farm is so small I cannot afford to hire outside of my own family. I do not find time to wander over my potatoe-patch and pull out the weeds now and then. I must cultivate by horse-power. I have not the time to use a hoe at all. The hoe never goes on to my farm except it is to dig a few potatoes. I cover my potatoes with a hoe, and that is about all. The question I wish to raise at this time is this—the real cheapness of the various kinds of food. Can a farmer, situated upon an alluvial soil, like the rich prairies of our country, having a farm of not more than a hundred acres, raise the root-crop, buy the machinery necessary to prepare the food for the animals, employ hired help that necessity will require to attend to a dairy of from twenty to fifty cows, and feed them on a portion of that kind of food each day, when he can raise corn for thirty cents a bushel, and oats for twenty-five cents. We have mills within two or three miles where

Digitized by Google

we can get it ground. I have been engaged in a diversified agriculture, making some butter all the time, raising some wool, a little clover-seed, and some oats, feeding some hogs and horses, and I have found it the cheapest food I can prepare for my cows—those that are giving milk—to raise corn, cut a portion of it up and shock it when I have time to do it, and feed it in that condition. Then I took a portion of that corn and shelled it, and mixed it with oats, and took it to a water-mill and got it ground. I feed a portion of that ground-feed to my milch-cows; another portion I feed to my hogs after cooking it. The question that arises in my mind is whether it will pay when labor is worth $20 a month, and corn can be raised at thirty-five cents a bushel, and sometimes for twenty-five cents, to attempt the cultivation of a root-crop. I can not do it without hired help. I can cultivate my own farm with my own family, with the horses and a little hired help; can raise a crop of oats and corn sufficient for the purposes that I have indicated.

Mr. CLARK: Mr. Eaton's remarks have called my attention to a fact that I would like Mr. Curtis's opinion on. In the county in which I reside I raise corn very easily. I wish to ask the question of Mr. Curtis with regard to corn-feed for cows. The question of labor has a good deal to do with it. The root-crop has failed often in our vicinity from rain, weeds, and insects. I think Mr. Curtis remarked that he cut up his corn and fed it to his stock in its natural state. I have practiced that for a good many years. I have been in this State for nearly thirty years, and cut up all the corn I have raised, except nine acres one year. One man can cultivate forty acres, by using a planter and a harrow, using the sulky-cultivator, etc., and keeping it clean from weeds. Now, when corn is cut up, if cut up before the frost, and well put up, it is harvested. It is hauled, in our section, any time during the winter. I want to know if cows, having all the green-corn they want to eat—that is, cut up and shocked—without any regard to feeding them anything else, if they are not wintered as cheaply, and make as much butter as though they were fed with all this variety mentioned?

Mr. CURTIS: I find cows will do well under those circumstances. I think you would find an increase of the quantity and also an improved quality of your butter, but it would not have as yellow a color as if roots were fed in addition, with fresh, early-cut clover-

Digitized by Google

hay. I think they would do well with that. I think, also, there would be very little loss from indigestion. My experience is that ground grain is very apt to pass off partially indigested. I think there is very often more loss from ground grain than if it is fed whole from the shock. We never feed in that manner. I have fed meal or corn upon a full stomach, and the animal lies down to ruminate, and the most of it is digested, and the hogs have access to the cattle-yard, and very little is lost. Unless you manage the thing nicely, by feeding meal upon a full stomach, there is some loss. I think the gentleman's plan of cutting up the corn and feeding it is much the best.

QUESTION: I would say that I have been somewhat engaged in the dairy business. Have manufactured some cheese, but mostly butter. My mode of feeding cows in the spring when they first come in is to use corn-meal. I plant corn for fodder, and as soon as my feed diminishes in the pasture I cut up this corn-fodder and feed it once or twice a day. In the fall I put my stock on to the meadows. Then I gather my corn in shocks, cut it with a self-raking reaper, and bind it in bundles, and set it up. After it gets thoroughly dried, we stack it. It is available at any time in winter. We feed it in that way. The larger the ear the longer we let it grow and mature.

Mr. SMITH: I would like to say a word in regard to raising roots for cattle. I have had some experience. There is one root that we have not mentioned. On the Island of Jersey, which is largely devoted to dairying, are the celebrated Jersey cows; and the parsnip is raised almost exclusively as a favorite root for feeding cows. I have some friends in this State who raise it and who have made some experiments with it. One man in particular raised it in a small way for years, and considered it the best root that could be grown for his cows.

In regard to the expense of raising carrots. I produced a crop a few years since, and kept an account of the exact amount of labor performed, commencing with the sowing of seed. The ground was prepared, manured, ready to receive the seed. The seed was sown by machinery, and cultivated. At the time when the crop was ready to harvest it had cost us twenty-five dollars and some cents. I kept a strict account of all the work we had performed, whether done by ourselves or hired.

Digitized by Google

Mr. BENTON: How much ground did that twenty-five dollars cover?

Mr. SMITH: I can't tell you. The crop was about six hundred bushels, less than five cents a bushel. That includes simply the raising of the carrots after the ground was prepared. Parsnips can be raised just about as cheap as carrots. The crop can be grown where your ground is rich and deep. As many bushels of parsnips can be raised to the acre as of mangel-wurzels. Generally they may be left safely in the ground all winter.

Mr. ALLEN: I would like to ask Mr. Smith how he manages to harvest the parsnips.

Mr. SMITH: There is more expense in harvesting parsnips than either the carrot or the beet. On my soil, a slight sandy loam, one can go along with a spade and shove it down into the ground and loosen the earth, and another pull them up and top them.

Mr. HAZEN: I have been interested somewhat in this root-crop for milch-cows. I have had some experience in dairying for a number of years. My dairy has been a cheese-dairy. I suppose what will apply to the cheese-dairy will apply to the butter-dairy. On my farm I cannot afford to raise roots for my cows. I have not much help of my own, hence have to hire. Labor is pretty high in this country. In one way and other the weeds got the start of me. I have as good a farm for weeds as I ever saw. I can raise a good crop of anything by taking care of it. I find more profit in raising corn for cows than in attempting to raise roots for them. I keep what is called a summer-dairy; calculate to have the cows come in the last of March to the first of May, and milk them through the summer. Our business is to get a good flow of milk through the summer season. We get our cows wintered through in pretty good condition, using meal, bran, and shorts. I have a wind-miil of my own, so I grind my own feed. I sow a crop of corn in drills for soiling. When it gets large enough, I cut it up. I pursue the course, stated here by Mr. Curtis, in sowing corn. Drilling is the best. I get a better crop by cultivating it some, especially on my weedy farm. Generally about the middle or the twentieth of July, the corn gets large enough to cut up. Then I cut it up and let it wilt one or two days. There is too much water in it when it is first cut up. I draw my corn down to the pasture and scatter it about, what I think my cows will eat

Digitized by Google

up clean. I usually sow the Sanford corn. It gives a large growth of stalks and keeps green until the frosts come. There is more nutriment in it than in any other corn I ever fed. I give them a little feed of bran and shorts every time I put them into the stable. They go right to their places. They have something to attract their attention. With the help of that and the corn-fodder I manage to keep up the flow of milk. If I do not use that all up before it gets ripe in the fall, I cut it up in good season and put it in shocks and continue to feed until winter sets in. It is good feed. After it is dried and cured it is still green and has a great deal of nutriment in it. As long as I feed corn-fodder I have no trouble at all in making good, yellow butter. If there is some corn in it, some small ears, all the better. This has been my course in keeping up the flow of milk through the summer. The corn-fodder, if I do not use it all, is excellent for winter-feed. Last year my corn-crop was a failure; a good deal of it not much corn on it. I find even this kind of corn is worth something for feed. It has got a good deal of nutriment in the stalk.

Mr. ANDERSON: Do you mix the cut-feed with anything?

Mr. HAZEN: No, sir; I feed fodder once a day, and one feed of marsh-hay.

QUESTION: How many cows do you keep?

Mr. HAZEN: Fifty.

Professor DANIELLS: What power do you run the cutter with?

Mr. HAZEN: I have a wind-mill. I have a wire-cable one hundred and sixty feet, carrying the power into my barn. If we get out of feed when there is no wind, we have an old horse-power that we use.

Mr. ANDERSON: Tell us what kind of a cutter it is?

Mr. HAZEN: I bought a cutter last winter. I think it was made at Rochester, New York; four spiral knives on a cylinder, and the knives are put on in the shape of an auger.

Mr. EATON: I have got one that cuts an inch and a half long; how would that effect the cattle?

Mr. HAZEN: I think if it was cut shorter, it would be much better. Half an inch or five-eighths of an inch is long enough, I think. With this feed-cutter we can cut a ton an hour of these stalks. It rolls out as fast as the shavings from a planing-mill.

QUESTION: Would a hard cob be any obstruction?

Digitized by Google

Mr. HAZEN: No.

Mr. CLARK: I have a cutter made at Rochester, of the same description of the gentleman's. I have used it nine or ten years, and have cut every year more or less, and have never laid out a farthing on repairs. It has four knives, cuts about three-fourths of an inch. I can cut the largest corn we raise. I send down to Illinois and get the larger varieties of corn for my farm, and have no difficulty in cutting them. I raise a large amount of corn. When it gets yankeefied, as I call it, I send down to Illinois and get larger corn. We run it right through, ear and all, however large the corn is. There is a handle and balance-wheel, and you can turn it by hand. We can run it by horse or other power, when necessary.

QUESTION: What do the knives cut against?

Mr. CLARK: They cut against a steel-plate. They cut up instead of down. There is a spring which gives if you are cutting a large ear of corn. I think that cost me $35 or $40. There is a larger size. They can be purchased in Buffalo.

Mr. EATON: Is there any further preparation after cutting this fodder.

Mr. HAZEN: None with me. As I have said, my corn was pretty damp. I cut up enough to last a week.

Mr, EATON: Do you wet it or put meal on it?

Mr. HAZEN: We do not in the condition it is now in. If it was perfectly dry you could throw a little water on it. If you want a heavy feed, you could put meal on it. Last spring my corn was husked. I cut the corn-stalks and threw water on them on the floor, and spread meal on it, and let it lay twenty-four hours, and then fed it. The cows eat it much better if it is a little damp; mine was wet; it stood in the field all winter. By standing two or three days and softening, they eat it much better than when it is fed dry.

Digitized by Google

## RENOVATION OF SOILS BY ROTATION OF CROPS.

BY A. A. BOYCE, LODI.

As all soils are formed by the admixture of the debris of rocks in the shape of sand, gravel, or clay, with the remains of plants and animals, in the form of mould, their value or fertility depends, not only upon the proportions of those substances, but upon the nature and composition of the different kinds of sand, clay, gravel, and mould. The careful, observant farmer studies the nature and composition of his soil, and adopts that system of cultivation that shall preserve or restore its fertility. The fertile lands of our State, when first brought under cultivation, produced abundant crops for a number of years. Wheat the most exhaustive of all the cereal grains has been grown on the same lands year after year, until the yield has been reduced from an average of twenty-five, to less than twelve bushels per acre, or below the cost of production. This exhaustive course of cultivation has been common to the western States, the necessities of the first settlers compelling them to grow wheat, that being the product most readily converted into money. Price of labor and value of products enter into the cost of production, and influence a rotation of crops. The cheapest and readiest way to renovate our impovershed soils, is where red clover is made to form the principal or leading crop, with short rotations of grain-crops. By such a system a greater amount of plant-food will be left in the soil than was found there at the commencement of the rotation system, and each succeeding crop of clover will leave the land richer. That this is practicable on nearly all of the exhausted grain-lands of Wisconsin, admits of no doubt, and by this system the farmer can place his crops in market at a cost which will leave him a fair profit for labor and capital used in their production.

It is said that among the modern nations, the people of Flanders (now Belgium) were the first to adopt a system of rotation of crops,



Digitized by Google

in which red clover was the leading crop, and by that system they have made their light, sandy lands rich and wonderfully productive. It was a saying among them that no man was a farmer who did not grow clover. They proved that, under their system, lands needed no rest, but grew richer by cultivation. There can be no doubt but that rotation in crops is as necessary to profitable farming as is rotation in office to a healthy condition of the body politic.

### ROTATION OF PLANTS

seems to be a law of nature. Where plants are removed from the soil, and the land left to nature, she supplies their place with plants of a different kind. When the same variety of grain or vegetable is grown year after year, on the same soil, without change of seed, there is always a tendency to deterioration, and this, where the land is generously manured, whereas, by procuring seed of the same variety from a distance the yield is increased, without adding anything to the soil; the increased yield being due solely to the change of seed.

### ROTATION OF MANURES.

The marked effect of changing manures on gardens and highly-manured lands, has been noticed. By changing manure the crops were increased. The late Joseph B. Lyman, formerly agricultural editor of the New York Tribune, related an instance that came under his observation, where a garden had produced large crops of vegetables for several years, where manure from the horse-stable had been used. At last it failed to produce good crops, and even the weeds grew sick of it; but by substituting barn-yard manure, it returned to its former productiveness. In this instance there was little or no difference, chemically, in the manure; the increased yield was caused by the change of the kind of manure. Frequently lands that appear to be exhausted contain an abundance of plant-food, but in a condition where it will remain until a system of tillage is adopted by which the plant-food may be brought into a soluble condition, suited to the wants of the crop.

### SUMMER-FALLOWING

is practiced to change the mechanical condition of the soil, making it fine and mellow, exposing its particles to light, heat, air, and rain;

Digitized by Google

to set free the plant-food that was before in a locked-up condition, and that plant-food may be drawn from the subsoil below and from the air above. Summer-fallowing was formerly practiced more than now. The same results can be reached, and a greater amount of plant-food placed in the soil by growing a crop of red-clover—its deep, penetrating roots disintegrate the soil to a greater depth than can be reached by the plow—brings from the subsoil and places within reach of the grain crops to follow, elements of plant-food.

### CORN

is an important crop in our system of rotation, and should generally follow clover, and made to take the place of summer-fallow. A clean, well-cultivated corn-crop, following clover, leaves the land in good condition for the crops of small-grain to follow—corn is regarded by many as the least exhaustive of the cereal grain, that during its period of growth up the time of ripening its seeds, it takes more nutriment from the air than from the soil. Corn, as a renovating crop, when sowed broadcast and plowed under, is placed next to clover.

J. J. Thomas, of New York, says in a communication to the agricultural department on this subject, that corn sowed broadcast and cut green for fodder appears to add to, rather than diminish, the fertility of the soil. Of three successive crops, without manure, each was larger than the preceeding one.

George O. Tiffany, of Milwaukee, in his experience of growing corn for green-fodder, confirms this statement. I think, however, that where corn has been grown for green-fodder, and removed from the land, and succeeded by grain-crops, the yield of the grain has been diminished. The fact that successive crops of corn for fodder can be taken from the same land with undiminished yield, makes it invaluable as a soiling-crop for dairymen and others to feed during the summer droughts. It can be grown on lands near the yards and stables continuously.

### PASTURE.

By a short rotation for pastures on our tillable lands we can keep more farm-stock, as a much greater amount of feed is obtained from newly-seeded pastures, than from old or permanent pastures; besides stock is kept in a more healthy condition. Old pastures

Digitized by Google

are apt to become infested with insects, the larvæ of which often find their way into the stomachs of animals and produce disease.

ROOT-CROPS,

which form so important a part in systems of rotation practiced in Europe, with us can only be grown profitably to a limited extent. Corn and clover take the place of root-crops in our system.

WHEAT.

In the three-years system of rotation, practiced by many of our farmers, with good results, wheat, oats, and barley followed corn, clover-seed being always sown with the small-grain. This system of rotation is highly beneficial in restoring fertility and cleaning the land of foul weeds. By clean cultivation of the corn-crop, weeds are rapidly killed; while many of the good effects of a summer-fallow is obtained. But one crop of small-grain is taken from the land, when the land is again put in clover; and with this frequent use of the mowing-machine and the corn-cultivator, weeds stand but a poor chance.

WILD-OATS,

so troublesome to some grain-farmers on our prairies, are easily killed out, and had we Canada thistles, I think they would have to succumb. In the four-years course of rotation, oats and barley follow corn, and wheat after barley or oats. In speaking of wheat in these rotations, spring-wheat is meant, that being the kind of wheat most raised on the prairie-lands of our State.

Where red-clover is made the leading, or as the Hon. George Geddes expresses it, the "pivotal crop," more stock can be kept, and larger quantities of manure made than by any other course of rotation. Nearly all the manure made on the farm should be applied to the corn-land. The use of plaster as a fertilizer is rapidly ncreasing. On sandy lands, dry prairie, and opening lands great benefit is derived from its use.

Since the days of Benjamin Franklin, when plaster of Paris was first used in America, plaster has remained a riddle that neither science nor practical skill has been able to solve; why it has such marvelous effect on dry land, and no effect on wet land. It is soluble in four hundred times its weight in water, and ought then to

Digitized by Google

be plant-food. Hundreds have used it on land with no perceptible good, while thousands who have applied it at the rate of a bushel to the acre have doubled their crops of clover Who, then, can tell why it fails, when it fails, and why under appearantly similar conditions it produces such magical results in vegetable growth; and this when such an infinitessimal quantity falls on each square foot, when sown at the rate of a bushel per acre. By all means let us use plaster where it is useful—use it on our clover, about our manure piles, and in our stables.

### MIXED FARMING.

A few years ago, on the high, dry prairie-lands near my home, three acres out of four were devoted to wheat-growing. Year after year, wheat was grown on the same land. For miles and miles the country presented almost an unbroken wheat-field. On large farms, the stock was limited to the working-teams, a few pigs, a cow or two, tethered with ropes by the road-side; no sheep; no fat cattle; no blooming clover-fields. This condition of things invited insect enemies. The wild-oat and other noxious weeds took almost entire possession of whole farms. In the impoverished wheat-fields, the chintz-bugs were rapidly propagated. Farmers were driven to bankruptcy by them, or forced to sell out and go west, there perhaps to repeat the same destructive source. Now, a change is taking place. This change may be termed the transition period in our farming, commencing where the exhaustive crops of grain taken from the soil, left it in a condition where cultivation had ceased to be profitable, to the adoption of a system of rotation, whereby its exhausted fertility is being restored. Now a system of rotation is being adopted. Large fields of red clover are seen. The lean cow tethered by the road side, has disappeared. On these hitherto dry and waterless-farms, an abundant supply of water is drawn from wells by the aid of pumps and wind-mills, and dairy-farming is profitably carried on.

"Red clover," says Joseph Harris, "is pre-eminently the renovating crop of this country."

George Geddes says, "it should be made the pivotal crop."

Dr. Daniel Lee says, "red clover draws more of its nourishment from the air than it does from the soil, and so returns to the soil when plowed down, far more fertilizing matter than it draws from

Digitized by Google

it. The power of red clover to take from the atmosphere nitrogenous matter and other elements of plant-food is indeed wonderful.

Mr. J. W. Wood, has well stated this, in his paper on "Rotation of Crops," published in the transactions of the Wisconsin State Agricultural Society, for the years 1873–4. I quote his statement here. "Boussingault's experiment ought to conslusively settle this question He transplanted young clover plants to a soil which had been deprived of all organic matter, protecting them from rain and dust and watering them with distilled water only. He says for some days they seemed to languish, but by and by they became remarkably vigorous. In a month the clover had grown to twice its original height, the plants had in all respects as fine an apperance as the clover of the same age which had been left growing in the field. Thus, in two months growth at the cost of air and water the clover had, so to say, trippled its quantity of organic matter and the weight of nitrogen contained in it was very nearly doubled."

Dr. Vœlcker, chemist to the Royal Agricultural Society of England, in his researches on this subject, published in the report of that society for the year 1869, gives a still more remarkable statement of the power of red clover to take and assimilate plant-food from the air. He says he found some of the farmers in the vicinity, that not only thought that clover was an excellent crop to prepare land for wheat, but asserted that the wheat did better when, instead of plowing in the second crop, they took it off. Dr. Vœlcker was incredulous, but he found other farmers who said, "our wheat does best when we let the clover ripen and save the seed, and put the wheat in after that." The doctor said it would be folly to deny this; I will look into the matter and satisfy myself. I am living here on the ground and can make the experiments. "He made the investigation and actually found that the quantity of those nutritive materials left in the surface of the soil after the clover-*seed* had been taken off was greater than when two crops of clover-hay had been cut, and greater when two crops had been removed than when only one had been taken off." Thus proving that the clover took continuously from the atmosphere during its whole period of growth elements of plant-food, and that a greater amount of plant-food than could be assimilated by the plant was taken by it and deposited in the soil. This was demonstrated by the repeated analysis of the soil made by Dr. Vœlcker, when one crop of clover had been

Digitized by Google

taken, when two crops, and when three, or the seed-crop had been taken, each successive crop left the land richer in plant-food. Practical, intelligent farmers agree and science demonstrates, that as a renovating crop there is no plant cultivated by us that equals red clover.

Mr. ANDERSON: I was one of the original introducers of clover in this country. I have advocated clover from that day to this. I do not wish any of the farmers to think they can depend on the atmosphere to grow a crop of clover. Rolling the land is good for clover, and the clover will be large. If the land is poor the clover is small, and there is the same atmosphere in both cases. If you would have good clover depend on a good soil. I have no confidence in the atmosphere. You may suspend an onion in a glass jar within an inch of the water, and it will grow. Sow clover in the sand, water it, and it will grow, and so will corn and many other plants grow in that way. It is a foolish idea to say that it does not require good soil to raise good clover as well as anything else. As I said before, do not depend on the atmosphere to raise good clover, but on good barn-yard manure, from good well-fed stock. Rotation of crops is a good thing. Put your ground one year in clover, one in corn, one in small-grain. Always seed down small-grain with clover.

Mr. CLARK, of Green: Those two papers are the very bed-rock of farming. I hold that any farmer who farms his land so that it grows poorer from one year to another is a poor farmer. That may be the case with a great majority. I can not help it if it covers my case. If I cannot keep my farm so that it is as good at the end of the year as at the beginning, I am going to cease farming. Clover I consider the very turning point of the whole. I do not know how to farm without it. I agree with nearly all the papers read. I wish to disagree with Mr. Barland on one point. I saw, in the transactions a year or two ago, where he stated that clover was a biennial; that it did not grow after the second year. A year ago last summer I had two acres of clover. I plastered it. I had a good crop of hay. Being very dry I had a small crop of seed. My clover all killed out, so last year my clover was old clover. I went into the field to see whether they were new or old roots that were

Digitized by Google

growing. Mr. Allen says if it grows the second year it will be light and spindling. I cut three tons of hay to the acre. This last year, on six acres, I got six bushels of seed to the acre, and on four acres, two bushels. The only difference was in the time of cutting the hay. This was the third year of the clover. If that is spindling, poor clover, I am not a judge. I call it a good crop; six bushels of seed to the acre on a part of it, and two bushels on the balance.

President STILSON: That cut first produced six bushels.

Mr. CLARK: Yes, sir. This is the second crop of seed from the same clover. It was plastered once. I left a place where I did not sow plaster to test the matter. The part not plastered did not produce half a bushel to the acre, and it was on the lower side of the ridge where it was naturally the best soil.

QUESTION: What time did you sow your plaster?

Mr. CLARK: I sowed it in May.

QUESTION: What kind of clover is yours?

Mr. CLARK: It is what is called medium. There are two kinds only, large and small. Medium is a misnomer.

QUESTION: How much plaster did you sow to the acre?

Mr. CLARK: I calculate to sow one hundred pounds. There was another experiment I wish to speak of. My corn-field this year is adjoining the clover. I manured it five years ago with twenty-five loads of manure, and I have manured it again since that. Where I sowed my clover has been pretty poor. I sowed corn on it, anticipating a poor crop. It was plowed in the fall at the same time with the other land. The corn looked the best on the clover-ground, and produced the best and largest crop.

Colonel WARNER: Mr. Allen has made the statement that clover is a biennial, and Mr. Boyce has made it to me personally. One of my neighbors had this spring a piece of three-year-old clover-sod. He sowed plaster on it, and got a crop of fine hay; cut the seed afterward which yielded five bushels to the acre.

Mr. BOYCE: In reference to red clover being a biennial, there is a good deal of difference of opinion; as a general rule it is. There are exceptions. Red clover is like many other plants. If not exhausted by bearing seed, they will live on for a longer time.

In the statements just made, all the conditions were favorable for the growth of the plant and the seed crop. Whoever cultivates

Digitized by Google

clover, however, with the idea that he is going to get a seed-crop each year for three years, will be mistaken nine times out of ten.

Mr. WHITING: I have taken a great deal of interest in this paper. Mr. Allen's farm adjoins mine, and his mode of procedure in farming I have watched pretty closely, and although he is termed an enthusiast, and by some a fanatic, I must say his enthusiasm, in the neighborhood and town where he lives, has caused a desire and inclination to follow in his footsteps, and I believe his neighbors pretty generally admit that Mr. Allen comes out ahead in wheat- and clover-raising, But it was not on this point I arose to speak. I came here to learn, to receive light; and I have listened with much attention to the remarks from others. With regard to clover's being a biennial plant, I am glad that the question has arisen. I read, a few years ago, in the New York Tribune, an article, from the Hon. Geo. Geddes, who has, for a few years, been the agricultural-editor of that paper, that clover was a biennial plant. I supposed that was a settled point. I concluded that was authority. I am aware that although rye is an annual plant, and dies the first year, under ordinary circumstances, yet it may live for an indefinite number of years. The general law is that such plants die when they have produced their seed—when they have reproduced themselves. I suppose that is the law of biennials. If they are not allowed to produce seed they will live for an indefinite number of years. There are some circumstances by which people are deceived as to biennial plants. I raised, last year, an excellent crop of clover on land where it had been for three years. I raised an extraordinary crop of clover. It didn't prove to me that clover was not a biennial plant. The facts were, the seed scattered the previous year took root, and grew, and matured, and made excellent pasture. The land, the previous year, was used for pasturage, and a few heads grew up, and raised seed sufficient to seed the land thoroughly and effectually for a new crop. That is no unusual circumstance.

Mr. CLARK: In the cases I mentioned, I dug up the roots and found the old stubs of the year before, so it could not have been a new root.

Mr. WHITING: That is an important thing; it was a wonder to me how that could be; it seemed to me a contradiction. The remark you made was that that crop was late. Had that crop produced a full growth of seed; had the plant become fully developed and pro-

Digitized by Google

duced itself effectually, I have no doubt it would have been the end of it.

Mr. BENTON: I have observed two things in regard to the life of the clover-plant. I saw something, several years ago, that might explain some of these seeming strange phenomena. I wish others would make observations in the same direction. The clover-plant, I observed, had been partially destroyed by haying, the roots broken off. The conditions in the spring were favorable. I found the crown of the plant had sprouted, and there was the old root and the old stubble, and a new plant sprouted from the broken spot, same as we cut a cutting of the grape, or anything of that kind, the and we find a new plant developed. I did not observe closely; I didn't think at that time of its importance. I saw the new plant growing there upon that old root where it was broken off. It was wet at the time, favorable for germination, and the new plant grew out of the crown, whereas if it had been dry it might not have been so. Clover has grown as long as I wanted it, but then I have not raised any seed. A case occurred on the farm of a neighbor of mine last year, which is one of the clearest cases of the effect of plaster on clover that could occur. A forty-acre piece was selected. Quite late in the spring about forty pounds, to the acre, of plaster was sown on about half of that grass-land. The plaster gave out and the man bought no more. He mowed the clover. and the product on the plastered portion was more than double that on the unplastered portion. The soil was very even, and fine for the experiment.

QUESTION: What kind of soil?

Mr. BENTON: It is what we call openings, a white soil; fine clay and loam; poplar and oak formerly being the prevailing timber. After the crop of grass was cut, the ground was ploughed in the fall, the sod turned over with a common crossing plow, about two or three inches deep; the whole forty plowed in that way. The plaster had been sowed east and west, and it was plowed north and south, and sowed to grain last year. There was at least a double yield of wheat upon that portion of the clover-ground that was plastered. The quality was superior and there was a double growth of straw. This is simply an estimate by the eye. There was at least double the yield of wheat, and more than double the yield of

Digitized by Google

clover the year previous. It is a perfect demonstration of the influence of plaster on that soil.

Mr. BARLAND: The fact should not be overlooked in considering the question of keeping land in clover more than two years. As I understand the raising of clover, it is principally as a renovating plant. If we continue this crop longer than the second year, we are working right against the object we have in view. A little courage is necessary when a crop of clover has arrived at maturity, to turn under the sod for the renovotion of the soil. I would like to ask this gentleman if there is any benefit to be derived by letting the roots decay in the soil. Is not the whole benefit derived from allowing the plant to arrive at maturity, and then turn the sod under.

Mr. CLARK, of Rock: I never turned a crop of clover under. I think if I take the crop off and turn the sod over afterward, it is just as well as to turn the crop under.

Mr. BARLAND: I didn't say to turn the crop under, the principal growth, but to turn under the roots.

Mr. ANDERSON: I have been raising clover for a number of years. I will state that either way will enrich the soil. I never plow down a crop of green clover, unless sometimes I plow a field that has been partially killed out. The decaying roots are enriching to the soil and also act as a filter or drain to carry the moisture down. That is not all. In the hot, dry seasons, they act as syphons to draw up the moisture from below. Clover is not an exhaustive crop, but a very beneficial one. The experience of those gentlemen, Mr. Allen and Mr. Benton, on that white clay-soil of theirs, is different from mine on the prairie-soil. My farm is prairie-soil, black soil. The benefits of plaster on that white soil are greater than on my soil. I have stated that I have tried plaster on corn; have marked the rows, and I could'nt find any perceptible difference.

QUESTION: State in what month you applied the plaster to the ground.

Mr. ANDERSON: As the corn was coming up, dropped it right on the hill.

QUESTION: How do you explain the fact that the chinch-bugs worked more effectually on the land that was rolled, if packing the

Digitized by Google

land and making it hard, is favorable for guarding against the chinch-bug.

Mr. ANDERSON: I claim there is no amount of rolling or slicking will keep them from it.

Mr. ROBBINS: I sowed five tons of plaster last spring. I never sowed any before. There had never been any sown in that part of Grant county, where I reside, that I know of. In fact, I don't know of any being used in our county, until this year. I sent to Milwaukee for ten tons and I let a neighbor have half of it. I sowed five tons myself. I had forty acres, that year before last I sowed to wheat and flax. I got ten bushels of wheat to the acre and five bushels of flax. I seeded it down the year previous. I got about forty loads of hay off of the forty acres. I sowed my plaster on this forty acres of clover in June, one hundred pounds to the acre. Had it sowed all by hand, and a man sowed sixteen acres a day. In cutting it last year we got over one hundred and twenty loads of hay. We got three loads of hay last year off of the same piece of ground where one only was produced the year before. My neighbor said it wouldn't be a fair comparison, from the fact that last year was a wet year, and the year before a dry year. I had eight acres of clover three years before, which yielded three bushels of seed to the acre. Half of that, four acres, I sowed plaster on, and the result was a double crop, although it had been in clover for five years. You could tell to the very foot where I had sown my plaster. Neighbors, coming up through it, would say, "What makes that look so much greener than the other?" The experiment with me was perfectly satisfactory. I planted sixteen acres of corn, putting manure on a part, ashes on a part, and plaster on a part. Where I put my plaster I couldn't see a particle of difference in the harvest of corn. I couldn't see there was an ear more to the row where I put my plaster and where I didn't. That may have been because it was a cold year. Where I put the manure I could see it to the very row. The ashes, also, improved the crop. They were leached ashes. It was all old stubble-ground where I had had oats the year before.

QUESTION: What time did you apply the plaster?

Mr. ROBBINS: I applied it in June, and right at the roots of the corn; put it on the hill with a little paddle—about a tablespoonful to each hill. I paid $6.50 a ton in Milwaukee, and it cost $10.50 in

Digitized by Google

Platteville. They tell me we can get plaster just as good for $2.50 a ton at Fort Dodge, Iowa. It will cost $7 or $7.50 a ton to deliver it in Platteville. There is no doubt that if that is good plaster, it is to our advantage to get plaster from Fort Dodge, instead of getting it from Michigan. Fort Dodge is where the cardiff-giant came from. What I wanted is to add my testimony in reference to the application of plaster. I was an unbeliever. You converted me last year at the agricultural convention.

Mr. BOYCE: I am told by Mr. Tuttle, of Baraboo, that arrangements have been made by which plaster can be delivered, from those plaster-beds at Fort Dodge, on the line of any railroad in this State, at a cost of $5 per ton, in quantities.

President STILSON: I would say it is unsafe to postpone sowing plaster until June. It should be sown the first week in May. Last year, being a wet season, Mr. Robbins got good results. In a dry season, he would have received no such results with June-sowing.

Mr. EATON: This subject of clover seemed to be the main point in the paper just read, and inasmuch as the personal pronoun "I," has figured largely in the discussion, I propose to have my say on the subject. I have been engaged in the cultivation of clover for some time. I live only twelve miles from my brother Clark. Mr. Clark has been using plaster with success. Similar papers to the one that has been read here, have been read on former occasions and have induced my immediate neighbors to sow plaster. It has been found entirely useless in the neighborhood where we live. We live on black prairie-soil. I wish to state to this convention the difficulties I have to contend with in the cultivation of a crop of clover. In the first place clover is usually sown among grain, mostly oats. The first difficulty is, the crop of oats grow up with such great rapidity as to make the clover spindling, and in many instances the clover falls down if a storm comes a few days before cutting it, entirely destroying it. The second difficulty is, having succeeded in the oats not growing too rank, with winters similar to the present one, the disagreeable spring causes it to freeze out; then I must plow it up and try it again. My third and last difficulty is this: when I get a good stand of clover, and it lives through the winter, when I go into the field with my mower and mow it, the horses tramp over the ground, the machine runs over it, and not having a tedder, it is almost impossible to cure it on the ground. If those

Digitized by Google

papers read here on the subject of plaster, are calculated to lead men in my neighborhood to sow plaster, it seems to me they will waste their money in the purchase, and waste their time in sowing it, because I think the plaster will not meet either of the three difficulties we encounter. When you talk about the benefits of plaster, tell the farmers present, that your farms are situated in the barrens; because I find that every man who uses a bushel of plaster on such soil as prevails over a part of Green county, will lose his time and labor, and the money he pays for the plaster.

Mr. CLARK: I would like to add a little on the other side of the question, lest we all get enthusiastic and think we are going to pay all our debts next year and get rich by the use of plaster. Where I live, near Beloit, we got enthusiastic over a statement Mr. Allen made in regard to sowing plaster. In our farmers' club we made arrangements and bought a carload of plaster, costing us $9 per ton, which we divided up among the members. We followed out Mr. Allen's direction. I had a boy go forward with a harrow, one man to follow sowing the clover, another sowing the plaster. On one forty acres, we would sow a strip a few rods wide and mark it with stakes and then skip a strip. I saved a barrel of plaster to put on my corn. It stands there yet. There has never been a particle of plaster bought in that vicinity to my knowledge since. There was not a place where any one could see a particle of difference from its use. I never grew as small clover. I have grown clover and had it stand up without difficulty, and make excellent hay.

QUESTION: Does the shading of land by a stack, or otherwise, add fertility to the soil?

Mr. HAZEN: I have listened with considerable interest to this question of raising clover with plaster. I attended some of the previous meetings here in this place, and was partly converted to the idea that plaster was a good thing to sow. I have experimented some with it. I would think it would be well for people, when talking about using plaster, to state the kind of soil they used it on. My farm is prairie and oak openings. It is pretty rich and keeps stock well. After attending meetings two years, I procured some plaster and sowed on my pasture and clover. Put it on corn; sowed it in different ways, by way of experiment. I failed to see any benefit from it. I wouldn't draw it home from Fond du Lac or any railroad station if you would give me any amount of it, for use

Digitized by Google

on my land. That is my experience with plaster. I think on some kind of soils it is a benefit. My farm is a rich prarie soil, and been stocked for twenty-five years. I have all the stock I can keep on it. I have not raised much wheat. Some one wanted to know how to keep grain from lodging. In a rotation of crops, one gentleman stated he would plant corn, after the corn he would sow small grain. I found difficulty in sowing small-grain after corn; it always falls. I have had a great deal of difficulty because the grain lodges and kills the clover. If any gentleman who has had experience in sowing grain on land like mine, can tell me how to make it stand up, I would like to hear from him.

President STILSON: I wish to call the attention of the convention to one point in regard to the contradictory statements of the effects of plaster. This is the result of the different qualities of soil entirely. Mr. Boyce's paper admitted that it is most beneficial on a clayey subsoil. The class of lands around Lake Winnebago that produce the greatest crops of wheat, are the lands affected the most by plaster; also, the sandy lands. I have ascertained this by correspondence, and by personal intercourse with men living on prairie-land, like my friend at Beloit, and others. The beneficial effect of plaster on their lands—that black mold—is very slight, if at all. Upon sandy lands, or lands with a clay soil, the effect is marvelous indeed, so that this contradictory testimony, coming from different men, is entirely from their standpoint, and in relation to the class of soil upon which they have tried it.

Mr. FLINT: I notice Mr. Allen stated he used salt. I think that explains the reason why his grain stood up better. In regard to plaster, I think he has sufficiently explained the different soils that will be benefited or not benefited.

On motion, the convention adjourned until 2 o'clock.

Digitized by Google

*AFTERNOON SESSION.*

President Stilson in the chair.

## RELATION OF THE SOIL TO WATER.

BY PROF. JOHN MURRISH, MAZOMANIE.

Water as existing in nature, is not a compound of oxygen and hydrogen merely, but a liquid containing well defined physical properties, such as the power to dissolve solid substances, and to carry such dissolved material in solution; the power also to absorb gaseous matter in most of its forms, especially such as carbonic acid, ammonia, and such like material as is essential to plant-formation. These properties of water constitute it one of the most powerful and widely-spread physical forces, and in its presence, and under its influence, is carried on the most important formations and transformations of matter in every department of nature.

In the mineral kingdom, water is a universal solvent, traversing not only the fissures and cracks in the earths crust, but the finest pores of the solid rock, gathering up waste matter, dissolving and removing in solution worn out compounds, changing the chemical constitution and relation of others, becoming at the same time the medium through which matter is removed from place to place to meet the demands of chemical forces.

Nor is water a less powerful or a less efficient agent in the vegetable kingdom. Rising in the form of vapor from seas, lakes, and rivers, it traverses the lengths and breadths of the atmosphere above us, seizing the waste matter, whether gaseous or solid, organic or inorganic, that is continually being poured into it from the earth's surface; and returning again in the shape of rain, snow, and dew, yields up this fugitive matter to the earth, which, with the less volatile residuum of decomposing vegetation on the surface, is conveyed either in solution or mechanical suspension to the soil, to be worked up into vegetable forms.

It is in the soil, however, where the properties of water are the most signally marked in their adaptation to the vegetable kingdom. Plants cannot live upon solid matter. No matter what may be the chemical constitution of the soil, it is not available as plant-food, or as plant-forming material, until it is reduced to a soluble

Digitized by Google

condition in water. And no matter what may be the nature of the mass of material brought into the soil; whether by natural agencies from the atmosphere, or by artificial means as fertilizers, none of it is available as plant-food, until it is prepared in water, and presented to the roots in the presence of water. Nor does the services of water in the vegetable kingdom end here. Rising through the roots into the plant, it becomes the vital current upon which the life and growth of the plant depends. What marvelous wisdom in this bountiful provision of nature. Water, after having scoured the heavens and the earth for material, and after having elaborated from this heterogenious mass in the soil, what was necessary for organic purposes, rises charged with the elements of organic life through the minutest rootlets, and in mute obedience to the laws of the vegetable kingdom, passes from cell to cell, furnishing everywhere through the plant, the tissue-forming forces, the elements of their work. And now, having done this, having yielded up its hard-earned solutions to vital forces, it is brought under the influence of sun-light, and passes off through the leaves as vapor, to commence anew its atmospheric work, and to return to the soil as before.

If we could command the condensation of vapor in the atmosphere, and bring it down to the soil in the shape of rain when we please, and in such quantities as we need, we could almost secure the quality, quantity, and certainty of our crops. But nature has reserved this right to herself, and calls upon us to make the best possible use of what she sends, by putting the soil in a condition to receive and retain it, subject to the demands of vegetation. The relation, then, of the soil to water, is one of the first questions in agriculture.

In considering this question, allow me, in the first place to impress this fact upon your minds, namely: That the soil is not an aggregation of inorganic and organic substances merely, but it is a combination of matter possessing peculiar physical properties, such as the power to absorb and the power to retain atmospheric water, and atmospheric air, and select as by elective affinity from what dissolved and gaseous matter they may contain, the elements of its fertility. These properties are—if you will allow me to use the terms in this connection—the vital forces of the soil; forces by



Digitized by Google

which its life, and fertility is maintained. But these properties, natural though they may be, are capable of being expanded and strengthened almost indefinitely by suitable cultivation.

The power of the soil to absorb water, will depend, in the first place, upon its chemical constitution, that is upon the kind of material entering into its formation. The lowest absorbing power is, no doubt, represented in a strictly silicious sandy-soil. Let us take this as the zero of our scale:

| | |
|---|---|
| Silicious sand being | 0 |
| Gypsum will be | 1 |
| Calcareous sand | 3 |
| Common soil | 23 |
| Sandy clay | 28 |
| Pure clay | 48 |
| Carbonate of lime | 35 |
| Carbonate of magnesia | 80 |
| Humus | 110 |

Here we have the comparative absorbing power of material entering into the formation of soils, or of some of them. I call attention to these facts for the purpose of showing that the absorbing power of the soil depends to a great extent upon the absorbing power of the substances composing it, and that this power can be increased or diminished as these and such like substances are added, or otherwise. But there is another phase to this question that we must not overlook, and that is, the soil has other relations, running in other directions, with which its relation to water must harmonize.

The power of the soil to admit the free circulation of atmospheric air, and to absorb the moisture and gasses that it contains, is another of its essential properties. In order to have a clear conception of these facts, we must learn to separate in our minds the soil from the substances of which it is composed. In doing this, we shall find that the power to admit the circulation of the air belongs especially to the soil, while the power to absorb water belongs more especially to the separate substances. Or I may, perhaps, simplify this subject still further by noticing that the soil is made up of finely-divided particles of organic and inorganic matter; but however finely divided they may be, they are particles of matter nevertheless, and that between these particles there are open spaces through which the air with its load of invisible vapor

Digitized by Google

and gaseous compounds will find its way. If you will allow me to do so, I will call these intercalar spaces the outer department of the soil, and set apart for atmospheric air. Now, it is not those spaces between the particles, but to the particles themselves, that we must look for the power to absorb water, and the true relation of the soil to water.

Now, if we take those particles of inorganic matter forming the soil, and place them under a microscope, we find that they are porous, filled with little cavities. Some of those cavities are the result of their original structure; others produced by the solvant forces to which they have been exposed in the change from rock to soil. If, on the other hand, we place a particle of organic matter under the microscope, we notice that it is made up of minute cells with well-defined inner and outer walls. No matter how small the particle is, its structure is cellular. The soil, then, is made up of those porous, cellular particles of inorganic and organic matter, and by your permission I will call these pores and cells the inner department of the soil, and adapted especially to water.

Here, then, in the inner department, in those cavities and cells, we find the power to absorb, and the place to retain the water necessary for the processes of vegetation. But for these cells and cavities in the particles of the soil, water would pass rapidly through it; or, if prevented from passing through by an impervious subsoil, it would remain, filling the spaces between the particles, obstructing the passage of air, and consequently drowning the roots. Or, without such cavities and cells to protect it, it would be exposed almost to the direct rays of the sun, and would consequently pass off rapidly as vapor. This inner department of the soil protects the water from too rapid drainage or too rapid vaporation.

While dwelling upon this inner department of the soil, I will notice another feature of its relation to water. In a well cultivated soil, that is where it is thoroughly pulverized so that each particle is freed from every other particle, and consequently surrounded by an atmosphere charged, as we know atmospheric air is, with more or less vapor. These pores and cells will, in dry seasons, condense on their walls, and consequently absorb what vapor this circulating air contains. It may be rather difficult for us, at first, to get a clear conception of the fact that these little particles of matter

Digitized by Google

forming the soil act as condensers, precipitators of the vapor, and gases in the atmosphere surrounding them; but such is unquestionably the case, and it becomes very apparent when we study the relation of the soil to the atmosphere.

For the present, I will notice but one other feature of this relation of the soil to water, and that is this; experience proves to us that our crops suffer as much—at certain times, and in certain conditions—from too much water in the soil, as they do from too little. The physical reason why, is no doubt this: In low lands, where the soil is resting upon an impervious subsoil, or in swampy land, where the drainage is cut off, and where the water is more than can be absorbed by these pores and cells, the surplus water remains in the outer department of the soil, filling the air-passages and rendering inoperative the air, which is one of the essential elements of organic life. The remedy in such cases is found, not in attempting to increase the absorbing power of the soil, but in under-draining it, and thus relieving it of this obstruction to the passage of air. These two departments in the soil must be kept separate, and the relation of the soil to water and to air must harmonize and run in parallel lines, if we would be successful farmers.

Other features of this question I might notice, but enough has been said to show that one great object of agriculture is, or should be, to increase the absorbing power of the soil, and to extend its capacity for water to such an extent as will guard the crops against danger in ordinary seasons of drought. This can be done only by a careful selection of material for the soil that has the greatest absorbing power, and the most extensive capacity for water, such as *humus*, that is, organic matter, or in other words, decomposed vegetable matter, whose absorbing power is 1.10, while common soil is but 23; and I may add, a system of cultivation that will not only widen the spaces between the particles, but keep them open, so that both water and air may find a free circulation. This, gentlemen, is the principle upon which cultivation rests, and the great want of the agriculture of our State to-day is more thorough cultivation.

Professor MURRISH: I would suggest to the consideration of this convention, this afternoon, the adaptation of plaster in connection with these particles of matter. We know plaster is composed of

Digitized by Google

lime and sulphur. We know plants take up very little sulphur. Plaster is not a very good absorbant of water. It is the lowest except the silicious sands. The question would be this: Does it not act upon the gaseous and mineral matter in solution, that is brought from the atmosphere, condensing them and fixing them in the soil? Such would be the relation to nitrogen, condensing them and fixing them in the soil. Hence, I think it is very possible that the plaster may act in this relation to the soil, condensing and absorbing and fixing the gaseous matter that is brought into the soil in the water, and in atmospheric air.

Mr. BENTON: I would say that I have felt very thankful that the officers of this society, for the past three years, have brought into our midst men of scientific culture and education upon these matters. I have been as much interested in those papers, perhaps more, than in any others. I am in hopes we will have more of them. The light thrown upon the sphere of agriculture is revealed in such a clear light, that it seems as though any person could comprehend it. The cultivation of the soil, and the relation of soil to water, are of primary importance. The more water passes through the soil, other conditions being equal, the greater will be your crop. That seems to be exactly the first conclusion to be derived from this paper. Science corroborates observation from actual experiment. I practice this in my soil by thorough cultivation of the surface-soil, pulverizing it fine, causing moisture in the soil. Whence comes it? It comes from the atmosphere being there condensed.

Mr. ALLEN: I wish to corroborate the statement the gentleman made in one particular; that is, in regard to the absorption by the land of ammonia from the decomposition of vegetable mold. I find the greatest benefit derived from manure by being spread on clover after the first crop is cut.

Mr. WHITING: I would like to inquire how it is there is an apparent anomaly in the statements made in the papers read, and statements corroborated by experience. I allude to that statement in regard to cultivating the land to produce moisture. I have noticed frequently, that the more you cultivate corn-ground in a dry time the more moisture will come to the surface. Whether that moisture comes from the atmosphere by condensation, or whether t promotes evaporation by capillary attraction, I do not know.

Digitized by Google

The anomaly I spoke of consists in this: The gentleman says cultivate your land, loosen it up, make it porous. This agrees with my experience. Then, again, we are told by others, roll your land, pack it, make it hard. I have noticed that when land has been thus porous, loose, by thorough cultivation, and is exposed to the direct rays of the sun, the surface very readily becomes dry dust; pass the roller over, press it together, and the next morning the moisture will be on the surface as though there had been a little shower. What I want to know is, how are you going to reconcile this apparent anomaly?

Mr. BOYCE: I apprehend that the same conditions are arrived at by using the roller, the cultivator, and the plow, simply pulverizing the particles of earth. When the particles are very dry and cloddy, passing over a roller would comminute them, make them fine, and in both cases the same result would be obtained.

Mr. ALLEN: That is the idea, perfect pulverization of the surface of the ground.

Mr. BENTON: The conclusions from this paper warrant this proposition, that the deeper the soil is stirred—I do not mean to turn it over, but that the deeper we stir the soil in that proportion we increase our crops.

Professor MURRISH: Yes, sir.

Mr. BENTON: Some soils are deeper than others. Deep cultivation, stirring the soil to the depth of twenty inches, but not turning it over, makes it more permanent and productive without any application of manure whatever.

Professor MURRISH: I would like to add one or two words to the paper unless the gentleman wants a direct answer to that question. I think it is well known to us all, at least every farmer ought to know this much, that a large portion, perhaps ninety per cent. of the material entering into the plant's formation, is obtained either directly or indirectly from the atmosphere. That is, it consisted before it entered into the plant-formation, as carbonic acid, water, ammonia, or some form of nitrogen. The question is, how does the the plant obtain this? Now, it has been stated here this morning that the plant absorbs such gaseous material through the leaves. Now, I must confess that I doubt it. I have no question about it, because it has been demonstrated by experiment, that plants would absorb carbonic acid through the leaves, but all the experiments

Digitized by Google

made so far prove that plants do not and cannot absorb either ammonia or water through the leaves; that all other materials enter the plant through the soil and through the roots. That material entering into the atmosphere, is either brought down through the atmosphere in solution, by rain-water, or else it is brought into the soil, and through the soil by the atmosphere, in the way I have stated. If it is obtained by the atmospheric air, circulating between those particles, then the deeper down we can get the atmosphere, the better for our crops, for this reason among others; it is further away from the absorbing influence of the sun and sun's rays. I suggest we should get the soil as deep as we can get atmospheric air to circulate freely, and it is better for the crops; the crops will have a deeper soil to draw food from.

Mr. CLARK: Professor, did I understand you to say that you doubted the absorption of water through the leaves of a plant?

Professor MURRISH: That has been experimented upon, and it has decided the question. It will not absorb water through the leaves.

Mr. CLARK: I want to know why water revives a plant when sprinkled on the leaves.

Professor MURRISH: That may work mechanically through the external pores. When I speak of absorption, I mean for the existence and maintenance of its life. The life-current of the plant depends upon the water entering the roots, passing up through the plant, from cell to cell, finally evaporating, through the influence of the sun's rays, into the atmosphere; the evaporation of the atmosphere draws up the current, and keeps this circulation going on in the plant. You might as well try to keep a plant alive without that circulating current as for a man to live without the blood circulating through his veins.

Digitized by Google

## A PRACTICAL APPLICATION OF SOME OF THE LESSONS OF THE YEAR.

BY C. E. WARNER, WINDSOR.

At the meeting last year, as those of you who were present will perhaps remember, an intelligent, healthy-looking middle-aged man arose and said, in substance, that he had attended several agricultural conventions at Madison, hoping to gain some useful knowledge that would be of practical help in his own case, but that he felt that nearly all the talk and papers were for successful men who did not need help. He stated that twenty years ago he bought forty acres of land in a fertile part of Wisconsin, and mortgaged the same for one hundred dollars. From that time he had worked faithfully, with no expensive or intemperate habits, and yet had not been able to reduce the mortgage; but, on the other hand, interest had accumulated until it was now about to take his little farm, and leave him nothing to show for his twenty years' hard labor; and he felt that he represented a large class of men engaged in agriculture who were not usually represented in these conventions. No answer was made to his appeal, as, indeed, no special answer could be made, without knowing more of his peculiarities as a farmer and financier. But his talk left a strong impression on my mind, and you will excuse me if I devote the short time assigned me to a few suggestions to that large class of farmers who are poor and, perhaps, unsuccessful. I do not expect to reach one-half of that class of lazy, do-nothing farmers, who infest every tavern, and who are already stranded on the shores of loaferdom, but it is in the hope that it may help some of those earnest workers who are struggling on the up-grade against odds, that this paper is presented.

The last year has been a peculiar one for Wisconsin farmers. Following a year in which the chintz-bugs nearly ruined the wheat-crop in many parts of the State, many farmers sowed less wheat and planted largely with corn. In August, frost, almost if not

Digitized by Google

quite unprecedented, nearly ruined the crop which at best was struggling against great odds during the very cool summer, so that winter found most farmers with less than the usual crop of wheat and empty corn-cribs, while many had to dispose of stock early in the fall, on account of that great deficiency. But we were blessed with the most abundant oat-crop of many years. How can we best utilize this to make up the deficiency? In large portions of Wisconsin, especially where grain-growing is the exclusive business, a state of great depression exists. When such farmers are asked why they continue a course which leads to certain failure, they say they cannot change; have no means to fence their farms or to stock them when fenced. Then there are discouragements in the way of stock-raising. Indeed, a paper was read here last year on the horse, in which the question was asked, what kind of horse can be raised with profit in Wisconsin, and the answer was, no horse at all. Good farmers have assured me often that it costs $50 per year to raise colts which sell for $100 at three years old, and from $15 to $20 per head a year to raise cattle, which sell on an average for $30 at three years, and about the same kind of talk in relation to other kinds of stock. Rather discouraging facts, these, when we are told that our only salvation is in keeping more stock and that we are to lose from fifteen to fifty dollars per head on all the stock we do raise. But are these statements correct? Doubtless they are in the experience of those who make them. To demonstrate a parallel negative in relation to some of them, I desire to cite the experience of a farmer of my acquaintance, who for short I will call the deacon, and I believe some parts of his system are particularly applicable to meet some of the wants of the present year.

The deacon commenced farming with no means, about the same time of my unsuccessful friend of last year, and on 80 acres of land. He has raised a family of fifteen children, gave them the benefits of the common school, paid all his bills and is now well fixed; his farm improving in productiveness, well stocked with good but inexpensive buildings, with every prospect of spending his declining years in comfort, surrounded by the fruits of his more active life.

His is a dry, prairie farm, but I had heard every year of sales of cattle and hogs at good, fair prices, better than the average in the county, and a few days since I called on him, having a desire to know more of his methods. He showed me a lot of two-year old steers

Digitized by Google

that he had sold in the fall for $30 per head, and had received his pay, but had agreed to keep them five months longer for $10 per head. He estimated that he could keep them for $3 per head. Astonished at the figure, he explained that he fed them two quarts of oats per day, and wheat-straw day-times and oat-straw nights. Two quarts per day, for one hundred and fifty days, is ten bushels, at thirty cents per bushel is $3. The manure, he said, would pay for the straw and labor. He stated that it had been his practice for years to feed all his stock, from calves up, two quarts per day of oats, and what wheat-straw they would eat with plenty of water and good care, stabling every night, and on stormy and very cold days, and his stock was all very thrifty and good sized. The difference between $3 or $4 and $10 in wintering stock, is enough to lead to success on one hand and failure on the other. His practice with pigs was to have them come in July or August. Feed pumpkins and squashes and light feed during the winter with very little corn; let them run to pasture during summer, and top off with corn when fourteen months old, thus making pork for three cents per pound, instead of six or seven cents when kept entirely on corn, being difference enough to account for success in that line.

He valued highly, soft-shell squashes to feed stock of all kinds. Could raise thirty to forty loads per acre, planting on rich ground in rows one rod apart, and from six to eight feet in the row. Every Saturday, if the day is pleasant, the boys being out of school, he draws the manure which had accumulated during the week, and spreads it on the corn-field for next spring. I saw nothing in his system or success which any industrious, careful man on a farm might not hope to imitate and equal. Of course we found many more successful men on a larger scale, but they often have a faculty for buying and selling, a natural shrewdness for bargains which seems born in some men, and which others cannot attain. We find fancy farmers who have made their money in speculation in some other business, who swoop down upon us as from above, and flourish their little hour with their new notions and fancy teams. Their race is usually interesting but short, and we gather few lessons from their practices. Exclusive wheat-culture in Wisconsin is ruin. The last year has demonstrated that corn will not always save us, and we are forced to the conclusion that we must adopt a mixed husbandry; must raise horses, cattle, sheep, and hogs;

Digitized by Google

wheat, oats, corn, potatoes, pumpkins, and squashes; make butter and cheese. Strive to adopt the best methods in whatever we undertake. In ordinary years, be sure that our expenses do not exceed our income. In every town we find some who adopt this plan, and who are upon the sure road to permanent success. Get out of the ruts. If you keep stock, keep the best, and give it the best of care. I believe the deacon's success was more the result of regularity and care than quantity or kind of food. If you raise your vegetables and fruit, get the best varieties and study and practice the best methods. A farmer must not go begging for work; an abundance is always at hand. Don't be afraid of it. Make your arrangements so that every day brings its duty with a reasonable prospect of reward.

I would present no cure-all or patent medicines for our ills, but would strive to infuse that old doctrine, that care, energy, and pluck are essential to success in all kinds of business, and in that financial millennium which we all hope soon will dawn, whether our God will be shining silver and yellow gold, or we lovingly embrace the rag-baby; remember his crown will be brightest—other things being equal—who has most to sell.

Secretary FIELD: I have been very much interested in Mr. Warner's paper. He has set forth many points of interest to us all. It is a paper that will elicit thought, if not discussion. He spoke of a man who was very prosperous. I would like to ask him if that man started without means.

Mr. WARNER: He had nothing except a wife and six children.

Secretary FIELD: There was one idea occurred to me during the reading of that paper. He said in fattening pork he never feeds corn all the year around, as advanced farmers are doing. I think he is mistaken. None of the advanced farmers feed their stock-hogs corn through the year. I call it advanced farming in feeding hogs, to have a good clover-pasture, oats, or some other green feed on which they can run through the summer, feeding no corn; abundance of green feed and plenty of water. Kept on such food they do better; make better pork, and certainly at much less expense. Another point of vital interest is, that whatever our income may be, live within it. I fully appreciate it. When I came to

Digitized by Google

Wisconsin I had small means; earned but little each year, but I tried to live within that income, if but $200 a year. Now, this society pay me a much larger sum than I then earned. I live within that. If it was one-half of it, I should endeavor to live within it. It is certainly an important lesson for every one, that whatever his income may be, to live within it.

Mr. CLARK: I tried a little experiment last summer, that I read of in some agricultural paper. I think it is very successful on a small scale. I had no clover-pasture for my hogs. I sowed half an acre of oats at the rate of three and a half bushels to the acre, and commenced mowing them as soon as they were high enough. Twice or three times a day I gave the hogs all they would eat of them. Those that I cut first came forward and made a good crop of oats. I had no half acre on my farm that paid me any better than that piece of oats. I had fifteen hogs that I fed out of it; they did well. I don't think I could have raised as much feed from any half acre on my farm as I did from sowing those oats thickly.

Mr. ANDERSON: This hog-question is always of interest to me. One time this year I had nearly four hundred, but I had one hundred and forty acres of corn killed by the frost. Of course, I had all I could in condition to sell, and sold immediately all that were fit for market. I am in favor of always keeping hogs fit for market. With breeders you cannot do so. I think the best way for one, who has quite a number, is to feed well, until clover comes in blossom; then turn them into the clover-field. Early in the spring, sow a field of early oats, the earliest variety. After your clover begins to turn yellow, don't wait until it is ripe; turn your hogs into the early oats, then into a later field if you wish to, and then into an early field of corn, and from that, into a later one, when they will be fit for market. It is the easiest way I know of to fatten hogs, and your land will be much improved in fertility by the process. Of course, this is better adapted to those who feed a large number of hogs than on a smaller scale. I concur with the deacon's plan of feeding calves. I feed oats twice a day to them. I think my calves of one year old are as good as my neighbor's two years of age, when wintered at straw-stacks. Mr. Lysaght, of Sugar River, told me he sold four colts one year old, for $800. He couldn't have sold those colts for that price if they had been of any scrub breed; they were half Clydesdale. I sold five colts that didn't average quite $120

Digitized by Google

each. There is a great advantage having the best breeds of horses, sheep, cattle, hogs, or other stock. A good three-year-old steer, half short-horn, is worth double as much as one of your Wood's breeds, of the same age. I have a brother who sold a car-load of two-year-olds, a short time ago, for $70 a head. A common scrub-breed would not have brought over $35. I want to impress on farmers that they must improve their stock of every kind and take good care of it.

Mr. BOYCE: Mr. Lysaght's stock is all of the improved breeds. It would do any farmer in this community good to go and examine this stock. He has now five or six two-year olds that he told me he was offered $200 apiece for, and yearlings of nearly equal value. Going over there has stimulated me. I do not like to see my neighbors have anything better than I have, consequently I have tried to follow suit. In a little while I expect to be with a few where he is with many. I would state Mr. Lysaght feeds, from the time they are dropped until he sells them, about all they would eat. I presume he makes more money than any man, or any ten men, within twenty miles of here, by farming. He tells me he makes more money than he did during the war. I was well satisfied then, but since that time I have failed to satisfy myself that I was getting paid for my labor. If we can raise a steer, which at three years old will bring $100, then I think we can get pay for our work. He sold a car-load last spring, a year ago, which averaged $115 a head; none of them over three years old. He showed me, a few days ago, a colt, less than seven months old, which weighed eight hundred and eighty pounds. It was three-fourths Clydesdale. He said he would not thank a man to offer him less than $200 for the colt. I can keep a colt and keep him well for $5 a year.

Colonel WARNER: That was a statement, I think, made in a paper last year. Of course, Lysaght's style of farming is first-rate and what we aspire to. My paper was not to help that class of farmers, but to help those who are low down. This man (the deacon) I spoke of was surrounded by no influence but what any man on a prairie-farm has. By adopting this method, if he attends to his business, he can raise stock and sell it for more than cost. I do not consider this the highest or best model, but one for a great many persons to imitate with success to themselves.

Mr. ROBERTS: The interesting paper that we have listened to

Digitized by Google

seems to be rather directed to the unsuccessful farmer. I do not suppose there is one in this convention. I think that, myself included, we have all met with a measure of success, or else we would not make our appearance here.

Colonel WARNER: I would ask the gentleman if he does not think there are a great many such men in the country that need help, and who ought to be helped more than we.

Mr. ROBERTS: I do. I think I have neighbors of that kind. I was just going to state one step that I would take to help my unsuccessful neighbor, and that is to take at least one good agricultural journal. I take two, and I think I owe, in a large measure, my success to taking, reading, and studying good agricultural journals. When I set out in life I had the idea of making for myself a comfortable home, and my plan was to sell my labor to the best advantage. I did not commence farming, although I ran in debt for land, and intended at some future time to make a home upon it; but I sold my labor for what I could get, and then when I felt able to go upon the farm, I did so; but all this time I was reading good agricultural journals. I thought I got a good many practical ideas. I learned there was no profit in half-keeping stock, starving them or stunting them in any stage of their growth. The profit was in feeding and growing that animal right along. Well, I couldn't have obtained that information from my own experience; but in reading the experience of successful farmers I found that to be their plan, and it looked reasonable to me. I had faith in it and I commenced feeding in that way. I was talking with one of my neighbors last winter about feeding cows and making butter. He said he couldn't afford to feed his cows more than a quart of meal a day. I told him I could not afford to feed less than four quarts. I could make no profit in feeding any less than that. That I learned by experience; but I learned it in the first place from reading the experience of successful farmers, and having faith in their practice. I cannot claim to have made as good sales of steers of my own growth, as I heard stated here. I sold, last spring, in June, seven two-year-old steers for $40 a piece. I thought that was a pretty good price, because I know my neighbors sold at the same time, three-year-old steers for less money; so, measuring myself by them, I felt that I was more successful than they were, and that was the result of my faith and practice in better feeding.

Digitized by Google

Mr. SHERMAN: When I first commenced farming, I commenced in the State of New York, and my first operation was a failure. I commenced keeping some stock; bought some steers. One of those hard winters came on. I was young, not being used to keeping stock; my hay got short, consequently grain was high, and the cattle got poor, and the next summer I declared I wouldn't be caught so again, so I sold them. That season we had plenty of hay and a light winter. That experience has been of more value to me than all the successes I ever had afterward. I find most of Wisconsin is fitted for mixed farming, and the larger the farm the better it pays. In some countries, small farms, perhaps, would pay as well in proportion to the cost as large farms, but in Wisconsin, and the further you go west, the more stock you should raise, and the more acres you should have. I have been a close observer all my life of my neighbors as well as of myself, and I have noticed generally that failures are caused by too often changing, as I did on the start. If a farmer is going to wheat-raising, if he fails one year, he should not give it up and plant corn. I couldn't estimate how much has been lost in the town in which I live, from planting excessively of corn this year, but it is many thousands of dollars. Last year the wheat-crop was almost an entire failure, consequently the farmer said, I won't go into wheat, I will plant corn. The corn-crop failed and consequently they lost. I have endeavored to keep along steadily in my farming, though I don't think it a good plan to depend on wheat every year. I think if one depends entirely on wheat from year to year, he will fail. Some years it pays. This year my wheat paid me better than anything else; last year it was a total failure. I wouldn't recommend special crops, though they sometimes pay well.

Digitized by Google

## WHAT KIND OF WHEAT SHALL WE RAISE?

BY J. W. WOOD, BARABOO.

The successful culture of wheat on land which has lost its virgin fitness, is doubtless the most desirable result which can be accomplished by the farmers of Wisconsin. The business of wheat-growing overshadows all other agricultural interests in the State. It is our great cash-crop for export, and places more money in the hands of a greater number of people than any other agricultural product, if not more than all others combined. We may be discouraged with our meagre success, and say that we will pursue other branches of farming, but wheat is the great staple of the civilized world. We may be overshadowed somewhat at present by the new lands of the west, but time will place us all on a common level, and intelligent culture alone will lead the way to success. It is not the scope of my present paper to discuss, in any degree, the methods of growing it. I take it for granted that wheat will be raised in our State, and that its culture will maintain its relative magnitude, as compared with other industries, even to the end of time. I simply wish to call attention to a "new departure" in wheat-growing, based upon what is termed the "new process" of grinding, by which "patent flour" is manufactured. That there is a new departure which it becomes us, as intelligent farmers, to recognize, is manifest by examining the market-reports for flour in any of our principal cities. The quotations, as given in the New York Tribune, for January 1, 1876, read in part as follows:

| | Per barrel. |
|---|---|
| For extra Minnesota | $5 70 |
| For city mills, extra | $5 25 to 6 25 |
| For winter-wheat, choice family, city mills, extra | 7 50 to 8 75 |
| For choice brands Minnesota patent | 9 50 to 10 00 |
| For very choice extra St. Louis | 9 00 to 9 25 |

From these figures we can see that there is a grade of flour worth nearly double the price of good common flour, and we can learn

Digitized by Google

too, that this highest-priced flour is made from spring wheat, and from a grade which would not rank high if on exhibition at any of our county fairs. It may reasonably be inferred that wheat which will produce flour of this superior quality will soon come to be recognized by a superior price in the markets of our country. This advance in price is already secured, and will, no doubt, prove a very strong inducement for raising the better wheat.

The following is from the St. Paul Pioneer-Press:

MINNESOTA WHEAT.

The superior excellence of the flour produced from Minnesota spring wheat, especially by the new process of manufacture, first introduced in this country at Minneapolis, is now universally conceded. The best Minnesota brands command a higher price than any other in the eastern markets, and the result is that Minnesota wheat has come into high favor with millers all over the country, who are rapidly adopting the new process, and that there is a large and rapidly increasing demand for Minnesota wheat, which has not been exposed to adulteration by being mixed with the wheat of other States in the elevators of Milwaukee and Chicago.

For this reason, wheat exported by the way of Duluth commands a higher price by several cents a bushel than when sent to Milwaukee or Chicago. But eastern millers are now so anxious to secure the Minnesota wheat, free from foreign mixtures, that there is a rapidly-growing demand for our wheat, especially from the northern part of the State, for direct through shipment by rail to eastern mills without any intermediate transfer.

A striking example of this new movement of our wheat-trade was afforded a few days ago, when a leading Boston miller came out personally all the way to Minnesota, to make arrangements for a supply of our No. 1 wheat for his mills. After a thorough examination of the wheat in different sections of the State, he secured the services of an agent to buy wheat for him along the line of the St. Paul and Pacific road, and made arrangements at St. Paul for the through shipment of a thousand bushels a day from St. Paul to the doors of his mill in Boston. He had tried, he said, the favorite varieties of wheat of every other region, found none to suit his purpose nearly so well as that of Minnesota, and having adopted the new process of manufacture, he proposes to satisfy the demands of his customers for Minnesota flour, by making the best grade of it in Boston.

We see from this that the reputation of this Minnesota wheat is firmly established, and we see too, that the facts given in the Pioneer-Press, are equivalent to a decided advance in the price of such wheat.

The following letter was written by Wm. P. McLaren, a prominent member of the Milwaukee Chamber of Commerce. It was published in the Baraboo Republic:



Digitized by Google

"*MILWAUKEE, October 4, 1875.*

"J. W. WOOD, ESQ:

"MY DEAR SIR:—Your letter is before me. I have been for twenty years identified with the flour-trade, and part of it interested in milling, but I am not a practical miller, and therefore not competent to talk authoritatively on the subject; but I will be very glad to give you the benefit of any knowledge or experience I have. The hard varieties of spring wheat are the only kinds that are really adapted to make 'patent' flours profitably, and of all hard wheats I have seen raised here the kind known as Fife is the best. The general reason why it is the best is, that it is hard and flinty and makes the most middlings. The details of the process are not of special importance to the farmers, so much as the main fact that this is the kind of wheat which the new style of milling calls for, and there can be no doubt that it will continue in demand, for the success of the so-called 'new process' is an established fact. Our millers are now not only supplying the trade in this country, but competing in the British markets with the very highest class—Hungarian and other flours—that have long commanded the extreme prices of any flour made.

"The Hungarian mills have for a long time reached the same results in making flour, with very clumsy and slow machinery, which our mills are doing by the improvements gotten up within the last few years; and every new mill fitted up seeks to improve, in some respects, on the others. The only question in respect to our favorable competition with the world in the highest grade of flours, is the supply of suitable wheat. In Liverpool, last summer, I had tests made by bakers with some of the highest class of Hungarian flour and a flour made by one of our best mills in this city. In my opinion, and that of all the experienced dealers who examined the bread, that made from the Milwaukee flour was fully as good, and the bakers who made the test have since been purchasers of that flour here, to take the place of the Hungarian. Flour can be made by patent process from almost any wheat, and it is true that many millers use softer and inferior wheats, from *supposed* economy, etc., but the better class of mills are all the time in search of the finest, *hardest* wheats. This led, last year, to the establishment of the grade of 'Hard No. 1' wheat in this city, and the demand for it is usually more than the supply, at a difference of from

Digitized by Google

three to eight cents above regular No. 1. The firm with which I am connected has to-day half a dozen cargo orders for Hard No. 1 which cannot be filled promptly through scarcity of that grade, although the price is now seven to eight cents over No. 1.

"I have examined the samples sent to our chamber and they are all very fine, but the sample of Fife wheat is the one which is specially interesting in relation to the present style of milling, and, in my opinion, is what the farmers of Wisconsin should specially cultivate. No other sample sent is adapted to make the best style of flour, and no other would bring the same price. To illustrate this and show the change in the relative values of different kinds of wheat, take current prices in Milwaukee to-day, as follows: No. 1, hard, 1.26; No. 1, ordinary, 1.17⅛; No. 1, white winter, 1.16; No. 2, white winter, 1.12½. Besides the market-value of the wheat, the Fife has another advantage which you, as a practical agriculturist, are no doubt fully aware of. It hardens earlier than most varieties of wheat and frequently resists the ravages of insects, towards harvest, when other varieties are destroyed. It was this peculiarity which led to its introduction (or rather discovery) in Canada. Your sample seems very pure and fine, and I hope you have a fair supply of it. The purer it can be grown the better, but even if not kept entirely separate, the larger proportion of hard Fife wheat that is found in our different grades of spring wheat, the higher will be their values in the milling centres of the world.

"I hope I have not tired your patience with these observations.

"Yours, truly,

"WM. P. MCLAREN."

We see by this letter that our enterprising middlemen have incurred some risk and expense in introducing the patent flour into the markets of Europe; the advantages of which must accrue in part to the farmers who raise the wheat. The sentence written by Mr. McLaren, which I wish to emphasize more particularly, is this: "The only question in respect to our favorable competition with the world in the highest grade of flours, is the supply of suitable wheat."

Here is an appeal to Wisconsin farmers, which they cannot wisely neglect. There are other facts in reference to this subject which I have obtained by correspondence with different parties,

Digitized by Google

which I deem it important to lay before you. Mr. W. J. Langson, the secretary of the Milwaukee Chamber of Commerce, has favored me with some communications. I will condense the more important of his statements for our benefit. In a letter dated January 17, 1876, he says: "In reply to your favor of the 6th instant, I would state that the grade of No. 1, hard wheat, was established by the chamber of commerce, in September, 1874. For a year or more previously, the same quality of wheat was bought and sold in this market by sample, and in 1874 assumed so much importance, as to make it nesessary to make a new grade for it. It was less sought for and of less value than the softer varieties of wheat, prior to the discovery of the process of marking what is now termed 'fancy flour.' The process was first introduced in Minnesota; I think about four or five years ago, and has gradually been adopted throughout the whole country. The superiority of hard wheat for making flour by the new process, was also first discovered by the millers of Minnesota. 'Fancy flour' can be made from other varieties of spring wheat, but not so profitably as from hard wheat. The latter has been comparatively scarce this season, and readily commands at this time six or seven cents per bushel more than regular No. 1. As you are aware the enhancement in the value of this kind of wheat is due altogether to the improvement in milling-machinery referred to, as the 'new process,' and this improvement has also enhanced the value of spring wheat generally as compared with winter wheat, thereby resulting greatly to the advantage of the great spring-wheat region, comprising Wisconsin, Minnesota, Iowa, Illinois, and Nebraska."

In another letter he says: "You have doubtless heard from Mr. McLaren before this, on the subject of 'hard wheat.' No sample I have been able to find of that variety is equal to the sample you sent us labeled, 'Fife wheat.' I send you a sample of No. 1, hard, drawn from one of our elevators. You will see that it contains a considerable percentage of soft wheat; still it is worth from seven to ten cents per bushel more than ordinary No. 1, spring wheat. Much of the 'hard wheat' sown last year in Minnesota, (from some cause not yet fully understood,) has become *soft*, only a very small proportion passing inspection as 'hard wheat,' though plump, bright, and of very superior quality, weighing sixty pounds and upwards to the measured bushel. It is proposed to make a new

Digitized by Google

grade for this kind of wheat, to be known as 'Extra No. 1.' The variety of wheat known as 'hard wheat' in this market, is the best adapted for making flour by the new process.

"Our inspection-rules state that, 'No. 1, hard spring wheat, shall be composed mostly of hard Fife or Black-Sea wheat, which must be sound, well-cleaned, and weigh not less than fifty-eight pounds to the measured bushel.'"

It will be noticed that the varieties of wheat which are mentioned as coming under the rule for "No. 1, hard," are the Fife and the Black Sea. Of the latter variety I have seen none in several years. Those who have raised it speak of it as a soft-strawed variety which is liable to fall down. It has not been very extensively cultivated of late years. It might prove a desirable variety in some localities, if the seed could be procured. The Fife wheat is a well-known variety which has been very reputable in years past, and still remains so. It is emphatically *the* wheat of Minnesota. It has been a profitable variety with Wisconsin farmers in the past, and has given way of late more because of the general mismanagement of our wheat-growing, than through any failure in itself. We have sought, by changing seed and hunting for new varieties, to remedy evils which lie too deep to be cured by such means. It has been mixed largely with softer-strawed varieties, in order to assist them in standing up, so that it is now difficult to find it in a desirable degree of purity.

The question naturally arises, why is this flour superior to that made from soft or amber-colored wheat? As nearly as I can find out, it is because it contains a greater percentage of gluten. Gluten is that portion of the wheat which children call gum, when they have chewed it until the starch and bran have been separated from it. It is a plastic mass, insoluble in water, forming a hard, flinty substance when thoroughly dried, and it is this same hardness which gives character to the grade of "No. 1, hard wheat." This gluten contains nitrogen and is in its composition nearly the same as the muscles of animals. It is the active, fermenting principle in making bread. Its abundance makes what is called a strong flour. In the baker's hands it is made to carry more water and so makes a greater quantity of bread of standard weight, and then, again, it is more nutritious and makes better food for the human family.

Digitized by Google

I have met with no analysis which will give the quantities of this substance in our home-grown wheats, but foreign wheats have been analyzed, and found to vary greatly in different samples. The Black Sea wheats abound in it more than those of England and France, and the amount in the same variety varies with the circumstances of its growth.

A deficiency is what is spoken of as softening of the wheat. In such cases it is replaced by starch, giving the wheat a lighter color and a softer texture.

It may be stated in general terms, that ordinary soft wheat contains not far from eight to ten per cent. of gluten, and it requires but a slight addition to pass into the flinty state. Johnston, in his agricultural chemistry, gives the analysis of some wheat from Odessa. One variety, called flinty, gave twelve per cent. of gluten, while two samples, called soft, gave respectively eight and ten per cent. Another sample from Odessa gave fifteen per cent., and one from Tagausay, on the sea of Asoph, gave over twenty-two per cent., of gluten. From observations which have been made in England, it is concluded that the presence of lime in the soil, is conducive to the growth of flinty wheat. Such wheats as are grown on lime-stone soils, or on the chalk-formation, are often mixed with that grown on other soil in order to give strength to the flour. In my own experience I have found a tendency to flintiness in any spring wheat which I have raised. There is no doubt but that heavy soils are better for flinty wheat than sandy soils. Experiment also shows that high manuring is conducive to the formation of gluten.

It is said that the Fife, when first introduced into Sauk county, was objected to by the millers on account of its hardness, but that when grown on sandy soil for a few years it lost this characteristic, and was no longer objected to. If this process of softening is a gradual one, it is possible that by procuring hard wheat for seed from time to time, the flinty character could be sustained.

There is a strong inducement found in the relative prices of the hard and soft varieties to lead us to sow varieties which may command the higher price, and which in any case can only recede to the grade of No. 1, spring wheat.

If wheat perfectly adapted to the manufacture of flour, of which a large percentage will bring five dollars per barrel more than ordinary flour, can be raised in any community, a portion, at least, of

Digitized by Google

its superior value, will find lodgment in the farmer's pockets. It can be sold by sample to millers who appreciate its merits, and need not enter the local markets in competition with the softer varieties of wheat.

Mr. ALLEN: I believe any kind of wheat, particularly the Fife, can be so invigorated by being sown upon clover-sod for several years, that it will be better than any Minnesota wheat we can get.

QUESTION: What kind of soil?

Mr. ALLEN: Mine is a clay soil.

Mr. GRAVES: I have been residing in this county for over twenty years. When I first came I made a success of raising wheat; but for ten years past it has been a failure. Farmers are losing money by raising so much wheat. Now, I have been raising corn and hogs every year, and have made money even when pork was three and a half cents a pound. I always have a clover-pasture and feed but little during the summer. In the fall I begin to feed, sometimes turning them into my corn-field. I never saw hogs do better. They will eat it all up clean and nice, the field not being too large for the number kept.

Colonel WARNER: In my paper I stated that exclusive wheat-culture would be ruinous to the average farmer of Wisconsin; yet I think the average farmer ought to raise considerable wheat. I think our climate is better adapted to wheat than to corn. I am not entirely certain about all the propositions in the paper read. Fife wheat seems to have failed, notwithstanding some say it can be kept up by proper culture. Other varieties have been introduced within the last few years of more value than the Fife. This variety has yielded from ten to fifteen bushels per acre, while others yielded fifteen to thirty.

QUESTION: What is the kind of wheat raised that yields from fifteen to thirty bushels per acre.

Colonel WARNER: There is a kind raised in this (Dane) county. It looks a good deal like Fife, and is called the Prussian or Judkin wheat. I am informed that, on the same kind of ground sown to the Rio Grande, it yielded from fifteen to thirty bushels. That has been my experience. It is a bald wheat. I have raised of this Prussian wheat twenty-five bushels to the acre, while the Fife and

Digitized by Google

Rio Grande only yielded ten. The former was good and the others very poor.

Mr. ALLEN: I would inquire if it is the same color as the Fife.

Colonel WARNER: It is. It has not been known to rust under the most unfavorable circumstances. The head stands out and looks like a smut-head. The head is longer than the Fife; not as compact. The straw is more vigorous and it will stand a week or two after it is ripe. It ripens later than the Fife. I don't know whether it is a hard or soft wheat, but in the general market it sells readily. It has every appearance of being a nice, hard, plump variety.

Mr. SHERMAN: I live in that town and I have raised that kind of wheat two seasons. It has been raised there three summers. It was brought into the country by Mr. Judkins. I couldn't tell from where. It originally came from Prussia, I believe. I am not certain, but think it came from the Patent-Office at Washington. It is all Colonel Warner says. Last year it was the only wheat I raised. It was the only wheat worth harvesting. I had about fifteen acres, averaging about twelve or fifteen bushels to the acre. Other wheat was not worth harvesting at all. I will say that that wheat is not entirely chintz-bug proof. It will probably withstand the bug better than any other wheat.

QUESTION: How many years have you known this wheat.

Colonel WARNER: It has been raised by Mr. Judkins for five or six years.

Mr. SHERMAN: It is a soft wheat. Millers do not like it. It brings a No. 1 price. It has a very pretty, bright-looking straw. I never saw any straw look as bright as my straw did in the stack. I have been in mountainous countries where they have no rains, and my straw was like the straw they have in such localities—very bright.

President STILSON: How is it with regard to lodging?

Mr. SHERMAN: I think it is less liable to lodge than other wheat. When it lodges it don't crinkle. You want to sow about the same number of bushels to the acre as the Fife. My experience is that if I had sown two bushels to the acre, this year, it would have been better. It is quite a large kernel and the larger the kernel the more wheat you should sow.

Digitized by Google

Colonel WARNER: What is your experience about it standing after it gets ripe?

Mr. SHERMAN: I never saw it crinkle.

Mr. WOOD: I procured a sample of wheat which came to my notice under the name of Bismarck wheat, and as Bismarck and Prussia are pretty much one in these latter days, it strikes me whether it might not be the same variety. It grew very finely, and when it fully ripened or matured I was not able, by any method, to designate it from Fife wheat which I procured in Minnesota. I gave up it's being a distinct variety; I said it was Fife.

Mr. ALLEN: There is a variety of wheat raised by a neighbor of mine he claims is a great producer. I have examined it but cannot discover any difference between that and my Fife. In my opinion, it is simply an invigorated Fife wheat.

Mr. PALMER: This wheat spoken of here, Mr. Judkins brought from the State of Maine. I presume it might have been Fife some one had taken down there. I also found there, last winter, a wheat they called the Lost Nation, and they were very successful with it. They have it all over the State; It looked to me like our club. I understand they have it in Iowa.

Mr. SHERMAN: I must take issue with the gentleman that this is not a Fife wheat. It is nothing like it. I remember well when Fife wheat was first introduced in Wisconsin. It was so hard and flinty that the chamber of commerce, in Milwaukee, passed resolutions to discourage the farmers from raising it because it was not salable. This wheat, the millers say, is a soft wheat. It appears to be a lighter color than the Fife.

Colonel WARNER: I see but little difference in the color of the berry. It is nearer like the Fife than the Rio Grande in shape and general appearance.

Mr. WOOD: It would be a lighter color if it is soft. A light color and softness go together.

Mr. SHERMAN: It is larger, stiffer, and longer-headed. The wheat seems to be soft. It seems to make very good flour.

Mr. WHITING: I would like to inquire if that variety could be procured and revived, why wouldn't the old-fashioned hedge-row wheat be valuable for patent flour. It was certainly a very hard wheat and very hardy until it became sickly from some causes unknown. It was a very productive wheat. It was supplanted by

Digitized by Google

the club, and that variety was followed by the Fife. If we could procure some of that seed and re-invigorate it, as they talk of here, I do not see why it would not be very profitable to raise. I think it was even harder than the hard varieties of Fife wheat.

Mr. ANDERSON: Sometime ago I raised considerable wheat, as high as one hundred acres a year, and the wheat with which I had the best success is a variety I can not find at all now. We called it California wheat. It was a very stiff straw. The wheat appeared almost as long as barley. The chamber of commerce resolved that they wouldn't take it at all; it was too flinty. It was large and amber-colored. It would make this patent flour. Certainly it was flinty enough; that was one trouble. The flour was a rich, creamy color, making an excellent quality of bread.

Mr. ALLEN: I had a very unfortunate experience with that two years ago.

Mr. ANDERSON: It stood the chinch-bugs better than any variety we ever tried. The straw was so stiff, so hard, it did not lodge. Will it not pay the farmers to have their wheat manufactured into the patent flour, ship the flour, and save the rest for feed.

Mr. EATON: I would like to ask Mr. Anderson, or some other gentleman, a question in relation to this patent flour. It seems to me that it is a matter of no moment as to the quality of wheat we raise for that purpose. I had a conversation a few days ago with a very intelligent miller, and he informed me that the amount of patent flour in a bushel of wheat did not amount to more than two or three pounds, that it was only the chit of the kernel that made the patent flour. It was procured only from the middlings, or shorts rather, being separated, and then ground.

Mr. ANDERSON: I would ask if that miller ever manufactured patent flour.

Mr. EATON: He told me he had, and that he had it for sale in our market. I had been so informed not only by him but by others.

Mr. ANDERSON: I have a son-in-law who owns a mill, and he has tried to enlighten me on that question several times, and I have talked with others. I understand that the way the patent flour is made, is by grinding the wheat very coarsely, then bolting it, then grinding the offal again, and it is by a suction that the flour is extracted from the bran, not by bolting—of course they do not make it all into patent flour. It is grinding the offal over the second

Digitized by Google

time, and it is that portion of the berry that lies close to the barn that makes the patent flour.

Mr. WOOD: I had no opportunity of learning the facts to my satisfaction before preparing this paper which I read to-day, but since I have been in Madison, I called on Governor Washburn to learn some of these facts, for I knew he was the very fountain from which we could get information on this subject. He informed me that they have a way of regrinding the middlings made in the ordinary process, so that out of a grist of ten bushels, you may get twenty to thirty pounds of patent flour.

I asked Governor Washburn this question: Suppose we had five hundred bushels of good, hard, flinty wheat, what proportion of patent flour would be obtained? He said, from five hundred bushels, or enough to make one hundred barrels of flour; thirty barrels would be the highest grade of patent flour; about fifty-five barrels would be a good grade of common flour, and fifteen barrels would be inferior; although it was so small an amount, there was still a great profit made by having this thirty barrels of exceedingly valuable flour to sell.

QUESTION: Did you understand there would be eleven pounds to the bushel of the patent flour?

Mr. WOOD: Three per cent. of flour. The process as given by Mr. Anderson is correct. It is double grinding; the first grinding coarse, then cleansing it and regrinding.

Mr. WHITING: Mr. Anderson said that the patent flour was taken out by suction. I understand it to be the reverse of that. When the wheat is ground it passes through a sieve, and the refuse is drawn off, leaving the patent flour.

Mr. HOUSTON: It runs down a spout, and there is a suction which takes up the fine bran you call middlings; and it then runs down over another pair of stones, and is ground over again. If they do not suck that fine bran out when they come to grind it again, they would cut that up so fine that it would run through the bolt and the flower would be specky.

Mr. WHITING: Did you ask Governor Washburn what the real proportion of the two better grades of flour bear to flour that was manufactured by the old process?

Mr. WOOD: I said to him, can you grind by the new process the soft wheat into desirable grades of flour? He said the flour made

Digitized by Google

from soft wheat, by the new process, is better than that made by the old process, but not as good as the flour made from hard wheat, but it would make a superior grade of flour that was satisfactory to the market.

Mr. WHITING: Under the old process we could take wheat to the mill and get thirty-six pounds of flour per bushel, beside middlings and bran; you say thirty per cent. of the best quality, and fifty-five of good flour. Does that eighty-five per cent. of flour amount to as much as the flour made from the same wheat by the old process?

Mr. WOOD: I should not think it did. It would require this fifteen per cent. of poor flour.

Mr. WHITING: What formerly went into the middlings was not classed as flour at all. It is now, as I understand, classed as flour. There are some six to ten pounds more of merchantable flour derived from a bushel of wheat under the new process.

Mr. BOYCE: I happened to see Governor Washburn's process and machinery for making this flour. He grinds, or more properly, crushes the wheat between a double set of rollers, hardened or chilled iron, running very closely together. He then passes it over a suction-machine, which takes out the fine particles. I understand he makes a great deal more flour, considering the three classes, than he did by the old process, all of the middlings being worked into flour. The object is to crush the wheat instead of grinding it, so as to leave the bran in so large flakes that it can be entirely taken out, nothing being left in the flour to injure the value.

---

## ORIGINAL CREATION OF THE SOIL OF WISCONSIN—ITS PAST COMPARED WITH ITS PRESENT CONDITION—MEANS OF IMPROVED FUTURE FERTILITY.

BY H. A. TENNEY, MADISON.

Any generalized discussion of the soils of a country warrants reference to those almost primeval agencies that in the remote past pulverized the sedimentary superficial rock-deposits, reducing much of their material to an impalpable powder, and in this way created,

Digitized by Google

as it were, conditions of vegetable and animal life that did not previously exist to any considerable extent in either the frigid or northern and southern temperate zones. For this reason, I trust to be excused for introducing in this paper some few geological facts, as well as theories, bearing locally upon the subject—far wandering, indeed, from the beaten path, in order to reach the most comprehensive conclusions which the case seems to warrant.

The student of geology who may travel westward from Madison toward the Blue Mounds, will, as he follows the old county road, and at about fifteen miles distance, come upon an ancient beach, so well defined and preserved as at once to arrest his attention. If, now, he will follow this to its termini, both north and south, he will find it continuous, except where broken through by existing water-courses, and maintaining a uniform level for a distance of over one hundred miles—one end, indeed, being in Illinois, and the other, as far as surveyed, reaching near the head of the Chippewa River, in Wisconsin. The extremities only grow less defined as they are covered or obliterated by later deposits.

This land-mark of the olden world is worthy of minute investigation, since it determines the limits of the glacial sea; the boundary of the drift in its southwestern progress, and of the extreme depression of the continent at the very moment when the frigid force had reached its maximum, and from whence the seas commenced to retire to their present level. Here, as to Wisconsin, was the fixed and final shore-line of the glaciers and the flood, beyond which they did not pass, and upon which the command of Omnipotence might well have been put: "Thus far shalt thou go, and no farther. Here shall thy proud waves be stayed."

Of this plainly-defined boundary of an epoch, it is but proper to say that the line, as now seen, crosses hill and dale, over prairies, ravines, and through forests and marsh grounds, in a winding and sinuous course, as it skirts the ancient shore; its material, in order and arrangement, similar in all respects to the beaches of our modern lakes, only somewhat coarser; preserving a uniform altitude, without reference to the present adjacent surface, and that its origin is neither the subject of doubt nor dispute among educated men.

Its present elevation is about one thousand feet above the sea level, and it is thus a measure, as it were, of the recession of the glacial floods at their culminating point in the interior of the con-

Digitized by Google

tinent. As this was the latest great geological change preceding the present, the existence of such a monument is necessarily of great interest to the world of science. All portions below this level were at the time submerged, and we are thus enabled to note, through the long ages, the several steps in the continental uplift, which, it is believed, acted with about uniform force throughout.

The rocky surface of our present limestone hills, as we know from examination, was the flooring bed of this icy sea. Their polished tops, wherever the material was sufficiently hard and compact, furnish indubitable evidence of the agency that planed them to a level, marked them with scratches more durable than the graven art could have accomplished, and they now stand as silent witnesses of the mighty changes that time has since wrought. As we descend toward the sea, either eastward or toward the south, the successive terraces met with attest the power, and mark the bounds of the receding waters, from age to age, as they retired from the land. Nature has written her record of the past in characters not to be mistaken.

Immediately following the conclusion of inter-continental depression, there came another era marked by what is known as the modified drift—a period of comparative repose—when the clays of that olden date were precipitated upon the bottom of the sea in the form of mud. About all that remains of this deposit is now found resting conformably upon the tops of such of our rock-ribbed hills as have withstood subsequent erosion. It has a variable thickness, which in this vicinity may be approximately estimated at about ten feet. West of the Blue Mounds, in portions of the lead region not visited by the drift, heavy layers of clays are found, which may possibly be referred to the same period, as their level indicates submergence at the same time. In any event, these clay beds as now found in place may be considered the parent of the soils and subsoils of the State. At present, what remains of them in place, may be regarded as mere outliers, marking what was probably the first deposit of the kind within our geographical limits. All else is of a secondary origin, either derived from this original source or the result of decomposing rocky strata, and accumulated elements of vegetable and animal decay, mixed more or less with the finely-pulverized sands or pebbles of the original drift-formation.

When the frozen sea retired, there came, in the course of time, a change of climate over all this region, which may possibly be ac-

Digitized by Google

counted for by supposing that the warm waters of what is now the Gulf of Mexico flowed inland through the great valley of the Mississippi—an ancient gulf-stream, laden with heat and moisture—followed by marine estuaries, covering largely the great inter-continental basin. Intensity of cold was followed by intensity of heat. The frozen and arctic waste became an almost tropical region, clothed with a vegetation hitherto, for a long period, unknown in this parallel of latitude. Warm zephyrs replaced the freezing blasts. Ice and snow retreated toward the north, defeated in the now unequal combat, and organic life, in higher forms, came to welcome the dawn of a new birth; advancing steadily forward as the coast-line receded in all directions from the primitive axis of elevation, or from "islands in the watery waste." It seems, from modern evidence, that the Pacific coast alone escaped these extremes of climate, and has probably maintained a nearly uniform condition of temperature since the era of the drift-deposits.

The proof of the existence of such a climate as is above described, independent of the fossil forms found on the great plains of the west, rests upon very plain evidence. The gigantic mammalia are found to have put in an appearance as soon as a condition was reached of adequate food-supply. First, probably, came the mastodon, and then the mammoth megalonyx, the elephant, and kindred species. These giants of a primeval world, required for their support an amount of food that would breed a famine in any of our townships for a single individual, if now living; and we are equally certain that no elephant, for example, could now survive the rigors of a Wisconsin winter, living in a state of nature. And yet these huge creations swarmed in millions during the period we are considering, intermingled with a great number of species of ruminants and carnivora. Their remains are often found over nearly all portions of the continent. The mastodon, covered with wool and hair, both ante-dated, and doubtless survived, the naked elephant, and longest held the field; disappearing finally only when existence upon the dwarfed vegetation of modern times had become impossible.

The soil of the drift-epoch must have been rich in every element of fertility, to have produced a vegetation capable of supporting these huge, if not monstrous shapes. They sprang into being when the continental surface was but little elevated above the sea. They perished when the elevation was sufficiently great to radically

Digitized by Google

change the flora of the country; and it seems probable that the last of these races must have finally become extinct on the lowest levels in the territory nearest to the sea; always granting that the climate remained mildest in that belt of coast, as in theory it would have been.

It is worthy of note, too, in this connection, that man, the future tiller of the soil, made his appearance at a period coeval with these gigantic animal creations—that the primitive race lived with, grew, culminated, and doubtless finally went out of existence with them, or at a period not much later. Under the name of "mound-builders," modern scientific writers place in one group, races of mankind whose ancestry may have reached back a thousand centuries; and comprise man, the semi-animal, in the same classification with man, the intellectual and at least partially civilized being. We may be sure that the human race, for a long period after it came upon the stage, was not made up of workers—that they lived amidst an abounding plenty—that, in the sense of rational beings, their lives were as indolent as worthless; and that they only reached mental activity and improvement by a long process of training in the rugged school of privation and suffering. The beginning and the ending of the mound-building races was doubtless strikingly unlike, for we find, toward the close, that they were undoubtedly an agricultural if not pastoral people, living in organized societies, subject to government, and capable of accomplishing great and durable public monuments.

There is not lacking evidence that our prairies and forest-lands were cultivated for ages by teeming millions of human beings, long anterior to the arrival of the red man. By comparison, indeed, the Indian is completely modern. In what manner the mound-builders finally became extinct can only be surmised; but if, as some suppose, it was by conquest by a superior race, *that race* itself also disappeared before the Indian came in, leaving neither mark nor monument to attest its existence. It seems more reasonable to believe that this primitive people died out in the same way, and under the same conditions, that finally exterminated the elephant and mastodon—a change in physical condition which they did not possess sufficient vitality to resist. They were tropical men, and could not survive an arctic temperature. That these nations emigrated southward and became merged with the Aztecs, is much less probable than that

Digitized by Google

they perished from a climate growing more and more arid and inhospitable—an impoverished soil, long cultivated, without renovation—a cause, indeed, so potent as to have involved the decadence if not ruin of many nations since the historic period commenced. The general effect of civilization, indeed—a few favored regions excepted—has been the destruction of every country, by the exhaustion of its fertility, and the waste of excessive culture, without returning to the soil an equivalent for what has been abstracted. There is not a nation of antiquity but has left behind an instructive lesson, in its final fate, upon this very subject. Civilized cultivation, as long practiced, has been little else than a war on nature. It is by no means improbable that the sage deserts and alkali plains of the west may have, in their time, been the abode of many nations, and possibly suffered decadence in conditions of life long before an increasing altitude unfitted the region for the abode of dense and compact populations. The lower levels of the continent may be said to be even now passing through the same successive, but slow stages of destruction.

But, whatever the soil of the sub-tropical, modified drift, or alluvial eras, and however great the fertility, we at least are conscious that we only inherit what remains of it, with such additions as decomposed rocks have produced, or as have resulted from modifications, the result of local causes. In general terms, the present gives us a more frigid and worse climate, and poorer soil than the past. Our arborescent and other vegetation have also experienced great decadence; and, except in the intellectual development of man, animal-life may be said to have suffered from the same cause.

The surface of Wisconsin, as to soil, may now not improperly be divided into three or four divisions or districts:

1. The area covered by the drift formation.
2. The area not reached by glacial action.
3. That portion in which, if limestone formations or drift-deposits ever existed, they have been so far removed as to leave few traces of a former existence. And to this classification might be added:
4. That section or sections so completely covered by boulders as to obscure the original soil of whole townships, if not counties—taken in the aggregate—embracing, generally, the region rendered fertile by decomposed trap-dykes and feldspars, with intervening marshes and lakes.



Digitized by Google

Of these it may be said, judging from the experience of older-settled States, that the portions covered by the drift will be found to possess the most durable elements of fertility. With no data at command to prove the fact, I hazard the suggestion that the most productive wheat-lands of the State will be found, on inquiry, to belong to the drift subdivision; that it has more permanent conditions of growth, and is less subject as a whole to climatic vicissitudes. While the vegetable mold, or general surface-soil, derived wholly from organic decay, is very similar in average thickness and probably chemical elements over all the limestone regions of the State, it can scarcely be considered as the source of durable fertility. The subsoil is the ultimate reservoir to be drawn upon, and upon its composition must depend, in its largest sense, the problem we are now considering. It may be said to be the remains of all past deposits intimately commingled, which is not true of any of the other subdivisions. The light surface-soil is simply the ashes of vegetable and animal decay, and as experience shows, becomes rapidly exhausted by continuous use. Successful agriculture must in the end look to the farm beneath for the source of durable and reliable wealth. Generally, this may be described as an arenacious clay, most usually deposited in distinct layers, not always equally enriching to the soil, and oftentimes some layers are found to be positively detrimental. In limited areas, too, in the drift districts, localities are met with from which the subsoil has been wholly removed, or never was deposited. Such patches very soon grow barren by cultivation.

The portion of country destitute of drift, as at present found, is comprised in the western and especially southwestern counties of the State. South of the Wisconsin River the subsoil is either the direct product of decomposed limestones, or disintigrated sandstone —river valleys excepted—or of heavy layers of clay, which in places attain a thickness unknown in the interior, unless in the beds of ancient lakes. These soils, while all relatively rich in fertilizing elements, are likely to be found, after long use, deficient in certain elements necessary to the highest results of agricultural production. Generally, the clays are tough, tenacious, impervious to moisture, do not readily slake when exposed to atmospheric influence, or readily assimilate with the humus or mold accumulated on their surfaces, and are not easily drained. When deeply covered with top-

Digitized by Google

soil, as in basins or depressions, they hold the waters as permanently as if the clay-surface was a metallic bottom, without a leak, thus subjecting the superincumbent porous mass to the condition of an over-saturated sponge during one part of the season, and to the vicissitudes of drought at another. The rain-falls are kept too near the surface, and do not penetrate deeply enough to form reliable reservoirs, so that the roots of plants are liable to either suffer from excessive saturation, or the reverse, when evaporation is rapid or long continued.

Under favorable climatic conditions, these soils are rich and productive, but taking the average of a series of years, are likely to prove less so than the drift districts. Clays, not the product of the drift, are usually created by local decomposition of the rock-strata, and contain few if any other chemical elements. The drift-clays, however often removed or modified, cover a much wider range of mineral matter, as a rule.

The third geological division comprises the sandy, and often poorer soils of the State, which are mainly in its central and northern parts. Originally the limestones now found outcropping along the lower Wisconsin River, may, and probably did, extend much further northward. But the proof of this, except as a theoretical speculation, may be said to have wholly disappeared in the interior.

The district is absolutely free of limestone and of soil into the composition of which that material enters. It is also destitute, or nearly so, of remains of the modified drift, and it seems probable that glacial action did not progress much beyond the head-waters of the rivers now flowing westward from the central axis of the State. But if this region ever was covered by clay-deposits, the whole has been subsequently removed,and now presents wide patches of barrens, covered by a dwarfed and stunted vegetation. It is not a very promising agricultural field now, but yet, in the light of advancing science, it would be premature to pronounce sentence of worthlessness on what may yet prove, for some classes of crops, the most productive soil in the State.

Advancing northward, the sandy-surface deposit is found to grow coarser, and, as a soil, less promising than further south. Areas, embracing whole townships, are found so covered with boulders as to completely conceal what lies beneath. Yet these localities are generally overgrown with heavy timber. Decomposed trap and

Digitized by Google

granitic rocks by no means produce deserts. The face of the country, too, is marked by dykes of igneous rock, arranged in pretty regular swells or elevations, running nearly east and west, usually between which are found the basins of those innumerable marshes and lakes which so stud the surface of this lacustrine, not to say hyperborian region. The dyke-surface furnishes a generally rich soil, made up in the main of decomposed feldspar, etc., and it cannot be doubted that such marshes as may in time be drained in that section, will be found exceptionally productive when subjected to the plow. Indeed it can be said of northern Wisconsin as a whole, that it is a far more promising field for farm industry than has generally been suspected, and its grain-crops may yet vie in quantity and quality with any or all other sections of the great west.

Of all our subsoils in all divisions, and to some extent surface-soils, it may be said in a general way, that they have been too long subjected to a washing or leaching process, to have retained all the more valuable elements for cereal crops. Every rain-drop that has fallen and percolated through the strata and returned toward the sea, has abstracted its little mite from the aggregate mass, and deposited it upon the lower continental levels. Wisconsin is among the oldest, if not the oldest, geological land-mark in North America; and, dating from the primary rock, has been longest elevated above the seas in probably every epoch. Geologists are agreed that since its submergence under Azoic waters, solid masses of its stratified deposits, over hundreds of square miles, have been melted down, as it were, and the whole material transported away to the depth of from three hundred to four hundred feet vertically, by no more active agencies than summer rains, winter snows, and occasional tempests incident to the latitude. By this silent, simple, and long-acting process, the past rich sub-tropical soil has been doubtless all removed, as no certainly well-defined remains are now to be found; and the evidence of its former existence can only be demonstrated by the fossil bones of the huge mammalian races that could not have lived unless under much warmer conditions of climate. The past wealth of our soil has gone away to enrich other sections, and what is left may be regarded rather as a refuse than the original and probably repeatedly changed material. All the territory bordering the Mississippi River below us, has grown

Digitized by Google

from the wash of our decomposed rocks and finely comminuted soils.

It has not been a purpose in the preparation of this paper to enter into any minute chemical discussion of our soils, or their special deficiencies in any locality, but rather to show their origin, and the probable reason for the absence of former fertilizing elements in their composition. The gypsum or plaster-beds outcropping in Michigan never existed here; and still primeval waters may have held the sulphates, etc., in suspension, and to some extent have added that element of fertility to portions of the State. The salt-deposits of the Saginaw basin have no representative in Wisconsin, and yet it may be presumed our earlier soils did not lack that fertilizer for ages, after the surface emerged from the sea. So, also, large areas of territory west of our boundary, whose surface-deposits are much later than ours in the geological scale, are now known as alkali plains or deserts, as that salt is found in excess, and in such cases is fatal to vegetation. Yet, in proper proportion, no fertilizer could be more valuable or desirable; and it is by no means improbable, if the experiment were fairly tried, that we might find in this material a substitute almost equally valuable with guano, for the production of cereal crops. The mighty tombs of the tertiary epoch—the terrestrial and fluvital bone-deposits, mingled with marine and fresh-water shells, which abound in such profusion all over the great plains, may yet be mined for their abounding phosphates; and it would seem of each of the enumerated fertilizers, that they would have special value and application to the soils of Wisconsin—that continental supplies of everything fitted to agriculture are complete in themselves, and only need intelligent use to accomplish every desirable, and perhaps profitable result. We must, indeed, replace the soil-elements which have leached away, and thus create new conditions and combinations of fertility. In this way our sand barrens may be redeemed, our clays renovated, and the surface-soils stimulated to new vigor and doubled fertility.

Our larger river valleys had also been eroded before the drift-epoch. The Mississippi, Wisconsin, and channels of all our interior rivers conveyed away the surplus waters of our territory to the sea from the very dawn of life upon the globe. The glacial ocean submerged, without obliterating them. As a consequence, or effect, so far as examinations have been made on the western slope of the

Digitized by Google

State, modified drift, or later clays underlie all these valleys, covered now more or less deeply by detritus washed from the adjacent bluffs, which is generally the lower, or Potsdam sandstone. Artesian borings in some localities, as at Sparta, on the La Crosse River, reveal heavy beds of submerged clays, underlaid by permeable deposits; the basins of the streams thus furnishing to enterprize, permanent and durable flowing fountains. It is more than probable that the same condition will be found to exist in the sandy bottoms of the Wisconsin, Black River, Chippewa, and others, if tested by the drill, and thus it may be anticipated that many arid valleys may be supplied with abundance of water for irrigation whenever proper efforts are made to secure it. Granting this once established, and a long step will have been taken toward increasing their fertility. From comparative agricultural wastes, they may in time, by skilful manipulation, be ranked among the best soils in the State, as every flowing well must bring from beneath those very elements, whose deep burial has so long rendered the surface barren and unfertile. The expense of artesian-borings in these valleys, will in any event be comparatively small, and within the means of the humblest citizen. *

The time is at hand when the use of artificial manures on a large scale, will be imperatively necessary. Every source of improvement, however apparently remote, is worthy of careful study. The soil requires for its perfection a return of the elements of vegetable productiveness already abstracted. With easier and cheaper transportation, increasing intelligence, and wider knowledge of the material already within reach, or ever to be, it is safe to anticipate that future generations may realize the results here indicated; that our marl-beds, peats, clays, subsoils, in connection with imported gypsum, salt, the phosphates, etc., will be accepted as the basis of successful cultivation—the reservoir or fountain of enduring prosperity for all ages to come.

Mr. ROBERTS: I would like to have Mr. Tenney's idea of how this country became peopled at the time when this was a tropical climate.

*The artesian well at Prairie du Chien, completed since this writing, is a striking proof of the correctness of this geological speculation.

Digitized by Google

Mr. TENNEY: I am afraid that would be rather foreign to the agricultural question, I can't tell how mankind came on the globe; but they were found at an early day on this continent, as well as on the other continents; that he only learned, as he moved farther north. As he got into a northern climate, got pinched by our Wisconsin winters; these sharpened his wits.

Mr. ROBERTS: I do not dispute but that this country was inhabited by a race of beings. I suppose there are indisputable proofs of that. I would like to know how they came here in the first place.

Mr. WOOD: I think we ought to have a corps of geologists here to discuss this last paper. I think they would doubtless admit that they had heard some new ideas advanced. As the gentleman spoke of that race of beings who had cultivated the surface of Wisconsin until it was worn out, as we are doing at the present day, it seemed to me that it was quite conjectural that a race of people, capable of accomplishing such results as that, would not have left some marks behind them which would have been more enduring than anything we find. In our present system of culture, which does exhaust the soil, if the present race of people should pass away, there would be traces left which would outlast more than one geological era or age. It don't seem so me that the little paltry mounds we find, which are no more than most school-children could have accomplished, if they took a notion, are of much value to base the supposition upon that there was a very numerous, intelligent people here, and that they cultivated the soil to such an extent as to exhaust its fertility, and unfit it for the dwelling-place of human beings. If it was inhabited by a race of people at that time, they must have been very insignificant in numbers. They are hardly worth considering. They have left no marks behind them; nothing that would compare with what would be found if another geological era were to pass over the country as it is at present.

Mr. BENTON: I caught one idea, and that is, that this paper gave us light relative to the gypsum-beds of the country. I would like to get some idea of the *modus operandi*. Whether it be a chemical structure of organic with inorganic elements. I don't know but it may lead some of the scientific men to examine and thus solve the question. I think we contribute liberally enough to support the educational institutions in this State. I think it would

Digitized by Google

be one of the practical utilizations of that money to get some light on scientific data by which we could determine definitely whether salt was one of the best fertilizers, so that we need not go blunderingly to work to purchase fertilizers with uncertain data as to whether they are applicable to our case. It has been brought up very vividly to my mind. Men have bought whole car-loads of plaster without knowing whether it was of any benefit to their soils. As a general rule it is not applicable to the alluvial soils of the State. The question is, would not salt, or the refuse of salt-works, or some other fertilizer be applicable in that case. Are there evidences to determine whether gypsum would be the best fertilizer, or lime, salt, Peruvian guano, or super-phosphates.

In this connection I would make a remark in relation to the plaster-beds of Iowa. The proprietor made the statement that their plaster was of superior quality to the Michigan. He gave as a reason that the stone was continuous, pure gypsum. That there was no foreign matter contained in it. He claimed that in the plaster-beds of Michigan the pure gypsum was worked up for other purposes than land-plaster; prepared for stucco-work, finishing walls, and only a second- or third-rate quality, a quality adulterated by nature with flinty particles and clay, was used as land-plaster. In purchasing plaster for our land, we purchased a certain amount of material of no more benefit to us than to shovel dirt from one place to another. He claims that all the plaster we get from Fort Dodge would be pure. It always has to be ground of a proper fineness to make it valuable to us in the proper time. I don't know but it is better to sow some coarse and some fine. The finer it is ground the sooner do we reach the end of its benficial effect. It can be ground so fine that the fertilizing effect would be lost in one season. The coarser it is ground the longer its effects remain in the soil. I want to know whether fine grinding is a benefit or not. He claims he can grind it very fine from the fact that it only costs $2.50 a ton. The Patrons of Husbandry of this State have made a contract for one hundred or more car-loads, and have contracted with the railroads at certain rates, by which that plaster can be delivered across the State of Iowa and into Wisconsin, for considerable less price than they ask for the Michigan plaster.

Mr. WHITING: Where will it strike the Mississippi?

Digitized by Google

Mr. BENTON: That will depend wholly on the trade. Probably it can be sold in every corner of Wisconsin cheaper than the Michigan plaster, and be worth from $1 to $1.50 more per ton on account of their being no foreign materials in it.

Mr. BOYCE: I would like to ask the gentleman whether he knows in has been used in this State.

Mr. BENTON: I have seen several persons who had used plaster from both sections. They claim the plaster from Fort Dodge was purer and also more finely ground.

Mr. BOYCE: I have used Michigan plaster. It was not pure. I was raised near plaster-beds, in New York. It was much better than the Michigan article. The Michigan plaster appeared to have a kind of fine, sharp substance, like flinty rock, ground up in it.

Mr. BENTON: I have seen the Michigan plaster-beds. The gentlemen who owns them states there is an adulteration of this plaster by nature. The best of it is ground up for stucco-work—calcined plaster. In Fort Dodge there is none but that kind in the bed. In Fort Dodge in requires less labor to get it. There is but little soil above it.

Professor DANIELLS: Every man can test the plaster for himself. Plaster is soluble in 450 parts of water. Take a small quantity, and if it will dissolve, no flinty particles are in it. Give it an opportunity to dissolve with a large quantity of water. If it is sulphate of lime, it will all of it dissolve. Before taking Fort Dodge or Michigan plaster, you had better ask the Michigan man's opinion of the Fort Dodge plaster, and then compare them. I have seen the Michigan plaster-beds. They don't require any stripping at all. I don't know anything about the purity or impurity of the two. Remember it is not soluble, except by a large quantity of water. It does not dissolve very fast. The time of dissolving depends upon the rapidity with which you shake it. It dissolves a little more rapidly in hot water than in cold.

QUESTION: Will it take several days to dissolve?

Professor DANIELLS: If you shake it, or heat it, it will dissolve faster. It does not dissolve rapidly like sugar or any thing of that kind.

QUESTION: Would it have to be put into rain or soft water?

Professor DANIELLS: Kind of water will make no difference. If

Digitized by Google

it is sulphate of lime it will dissolve, while flinty matter will not dissolve.

Mr. BENTON: Will your test detect clayey matter? Will not sandy-clayey matter dissolve in water almost like sugar?

Professor DANIELLS: Clay will not dissolve in water any more than sand, but it will take sometime to settle.

Mr. BENTON: It diffuses itself all through the water and colors it.

Professor DANIELLS: It will settle after a time. It won't dissolve. That you can tell by taking an ordinary piece of printed paper, and put the water in a funnel, and pour the water through it. If it is well mixed up, an ounce would represent a barrel.

Mr. BENTON: There is another question. If plaster is well ground and put into ordinarily good conditions of storage, does it deteriorate if kept over winter?

Professor DANIELLS: I can't see any reason why plaster should—stucco would. Owing to the physical properties of gypsum, I don't see how it could change.

Mr. ALLEN: I think public opinion is, that it does deteriorate. I understand the Iowa plaster contains, from analysis, about 55 per cent. of sulphuric acid—15 of lime. Both of the Michigan plasters are 54 per cent. I forget the traces of lime in either of them.

President STILSON: I have enjoyed a long connection with the State Agricultural Society, and those connected with it. The best understanding and feeling has prevailed, and I have enjoyed and learned much from our agricultural conventions and fairs. I must say that among them all I have not seen one where we got right down to work any better than we have to-day. I regret that I cannot remain with you until the close of the convention. Business calls me away to-night.

## RESOLUTIONS.

Committee on resolutions reported as follows:

*Resolved*, That the agricultural interests of the State of Wisconsin demand the establishment of an agricultural journal in the State, devoted especially to promoting its progress and prosperity, and that we as farmers and citizens of this commonwealth will do all in our power to support such a paper.

*Resolved*, That we recommend the farmers of Wisconsin, to organize, as rapidly as possible, town fire insurance companies, as provided for in the statutes of the State, such insurance companies having proved both safe and beneficial by actual experience for over three years.

*Resolved*, That the forced resumption of specie payments will be both impolitic

Digitized by Google

and runious, to a great extent, to all the industrial interests of the country. We therefore ask that the bill passed by Congress to resume specie payments in 1879, be immediately repealed, and that resumption be left to those economic laws of trade, which will work out the desired result without convulsion or material detriment to either debtor or creditor.

*Resolved*, That a copy of this resolution be sent to each of our Senators and Representatives in Congress.

---

WHEREAS, In the administration of government there should be a settled and permanent policy as to all great measures, and they should be wisely maintained and firmly enforced for periods sufficiently long to fully test their efficacy and bearing upon human society, unchanged by either caprice, folly, or as a temporary expedient of the hour; and,

WHEREAS, There is greater danger and loss to communities from weakness and vacillation in public measures than would probably arise from their rigid enforcement, even in cases where defects are palpable; and,

WHEREAS, After two years of expensive litigation in the highest courts of the country, to vindicate the constitutional rights of the State to control its incorporated companies, it is unwise and wrong, in the moment of victory, to abandon the ground thus gained; to surrender the fruits of the struggle, and return to the same condition of indifference to extortion and abuse as at the outset, and that no cause or emergency has arisen to warrant any such betrayal of the rights and interests of the industrial and labor classes of the State; therefore,

*Resolved*, That we, as agriculturalists, do hereby protest against the repeal of the law known as the "Potter-law," but would recommend a modification of its provisions, if deemed unjust and oppressive to the railroads of the State.

*Resolved*, That we recommend the continuance of a railroad commission, with full powers to ascertain the real investments of capital in the several roads; their expenses and earnings, that the legislature may know what constitute "fair and reasonable rates." And we believe it to be the duty of the Attorney-General, to defend any complaint at the expense of the State, in any action brought by any citizen of the State for any violation of the provisions of said "Potter-law," and that the cost thereof be paid from the public treasury.

*Resolved*, That a copy of the foregoing preamble and resolutions, be forwarded by the secretary of this convention to the presiding officers of the Senate and Assembly, with a request that it be spread upon the journal of each house.

---

WHEREAS, The Centennial authorities at Philadelphia have recommended especial preparation for the celebration of the coming fourth day of July in each organized county in the United States, and that a competent person be selected to prepare a historical address to be delivered on that occasion, to embrace the historical facts and data pertaining to the development of the county within the century; and,

Digitized by Google

WHEREAS, We believe that if the suggestions were carried into effect in the spirit proposed, a compilation of historical facts could thus be secured of incomparable value for all future time; therefore,

*Resolved*, That for the purpose of certainty and uniformity, this convention recommend that each county agricultural society within the State, at its first and earliest meeting, appoint a suitable and competent person to perform this duty.

*Resolved*, That we also recommend that these papers, when so prepared, be forwarded to the Secretary of State, and by him filed for future reference, or be published, as may be determined.

*Resolved*, That the secretary of our State Agricultural Society be directed to forward a copy of these resolutions to the president or secretary of each agricultural society in the State, and urge action thereon.

*Resolved*, That the Society earnestly ask a return by the United States postal-department to the rates of postage on all third-class mail-matter, which obtained before the amendment passed at the last session of Congress; and that our secretary be instructed to forward a copy of this resolution to each member of Congress from this State.

*Resolved*, That this Society memorialize our Senators and Representatives in Congress so to extend the scope of our signal-service as to give the benefits of its observations and deductions to agriculture, by sending warning to every telegraphic station of the approach and probable extent and severity of such storms as may occur between April and November; and also the cold-waves, their path and probable severity. We hope, also, they will make every practicable effort to extend one circuit of observation around the entire great circle of the globe, in our own general latitude, without which no philosophical observations of the weather can be considered in any degree complete.

*Resolved*, That the secretary of this Society be instructed to transmit a copy of the report of this committee to each of our Senators and Representatives in Congress.

Mr. BENTON called for action on the first resolution, relative to an agricultural paper.

Mr. ORLEDGE: It seems to me that with the exception of one or two resolutions here that it would be entirely imprudent for us to act upon the others. This one with regard to taking measures to establish a paper is one that I am directly and personally interested in.

Mr. ANDERSON: Is it to establish, or to encourage to establish?

Mr. ORLEDGE: To establish one. I think, gentlemen, that that resolution may be laid aside, and for this reason: I have been invited by two gentlemen to take an interest in a paper. One offers me any thing, without being definite, as to what any thing means that is reasonable, if I choose to take a part with him. The other offers to find the money, do the labor, and work of editing. He is a practical printer, a good editor, a respectable, conscientious man,

Digitized by Google

whom I think we could all trust, perfectly competent to deal with the questions at issue. Since I have been here I have had an interview with some gentlemen, and I find that there is an opening here for such a paper. I telegraphed to the gentleman to come here and meet me to-night, and he writes, among other things, "but I think I comprehend this subject in its length and breadth tolerably well, and I think I can edit a paper satisfactory to all concerned. Now, if you can make any arrangements by which a business of this nature can be carried on, and I can have the management of the editorial columns, I will wait for any compensation until all other necessary expenses are provided for. I will leave that compensation, as well as any interest I might be entitled to, entirely upon the growth of the concern. If your business this evening is in the nature of a consultation, you may act for me."

That is about as liberal as a man can write. I am not at liberty to give you his name to-night, not because I want to keep it from you, but other parties outside of us are watching, and I don't want to put anything in their hands to use against us. This gentleman spoke to me, when I went home from the consultation we had the 18th of last month, and made me the offer I have told you, and he asked me if I could feel that I could depend upon the farmers of Wisconsin to stand by me, and support a paper that was edited in their interest; and, my friends, I am sorry that I could not look him in the eye and say that I could. Now, it is painful for me to feel that in truth I cannot say that the farmers of Wisconsin would pay a dollar or two to support a paper of that kind. I don't know how you feel on that subject, but it is painful to me. I have been since that in Chicago—I have seen how Mr. Noonan, of the Industrial Age, is distressed for money. I have seen how the poor man sits on a grid-iron, heated red-hot, all day long. I have seen his heart almost torn out of his body by people coming there and dunning him for money. He has been in that position nearly three years, yet all the States in the Union barely give him enough to pay his expenses, which are five or six thousand dollars.

How, in God's name, can we expect to succeed when we starve the men who are working for us, in that way. He tells me that he has sunk $8,000 there. He tells me that he has had his wife sell an insurance policy on his life to put in there. I know that he has a friend who has given him $750. I find he has been forced to draw

Digitized by Google

on his friends. Don't think I am talking for myself, for I am not. If I were to ask you for ten, fifty, or one hundred dollars, to help the thing along, I should not expect it; but when you can have an organ that will fight for you, doing everything for you, then I say you ought to be able to find twelve shillings or two dollars a year to support it. Now, I am willing to come here, and with this friend, to put my heart and soul into this work. I am not a stranger to a good many of you. There are men here who know how I have flung myself into this cause regardless of self. Now, can you, as a body, or a few of you here, give me the assurance that you will each of you, all of you, go home and use your endeavors to support an organ in your own State, to advocate your cause, that shall be able to deal a blow back for a blow given, and if this paper down here says we are doing injury, and that we are hindering the business of this country, that we are doing wrong to every body; that we shall have some body and some place whereby we can be heard on our side. We stand to-day without a single weapon to strike back against the men who are crowding us into the earth. They ridicule us, they treat us with contempt, because they know we are powerless. When I see such things in the papers, and they do not give me a chance to say a word, I pray heartily I sometime may be placed in a position where I can hit back as hard as I am hit. Depend upon it, I will do it if I get there. It is for you to do it. Brains may edit the paper, but my good friends, dollars must buy the bread and cheese.

Mr. CLARK: After the expression that has been used by Mr. Orledge, I can speak only for myself. That is, if there is a paper started in Madison they can count on one subscription, and all the influence that I have to support it.

Mr. HAZEN: I supposed the paper was to be purely agricultural. I take it that the resolution offered here is to establish an agricultural paper in this State. He talks to me more like establishing a political than an agricultural paper. An agricultural paper should leave politics out of the question. Such a paper as that I am willing to take hold and support, give my influence. and raise a few dollars to help it along.

Mr. ORLEDGE: The paper I spoke of here, would be a perfectly independent paper. That would be my idea, striking straight for the truth, without regard to party. It seems to me that experience

Digitized by Google

shows us in Wisconsin that we cannot support a purely agricultural paper. You have not done it. Mr. Morrow had to go away from here because he was not sustained. I think both can be combined without making a party-paper of it.

Mr. ROBERTS: I wish to offer a substitute for that resolution:

*Resolved*, That the agricultural interests of the State demand the establishment of an agricultural journal devoted especially to promoting the progress and prosperity of the State, and that we, as farmers, and as citizens of this commonwealth, will do all in our power to support such a paper.

The reason I offer this substitute is, I find a good deal of indefiniteness in the resolution as offered by the committee. It does not say the establishing in this State; and I see from Mr. Orledge's remarks, that he is for establishing a political paper. I am supporting all the political papers I want. I think we are well provided with political papers. I would like to see established here, or at some other point in the State, such a journal as the Western Farmer was the last few years of its publication. I would be willing to give one subscription, and perhaps more, to see just such a paper; not a political paper. I believe the interests of agriculture in this State demand such a paper.

The substitute was adopted.

Mr. WOOD: I have listened to the remarks of Mr. Orledge, and was a good deal mystified by them. I do not feel that I am a miserable wretch, and should get somebody to fight my battles for me politically. I want an agricultural paper as the Western Farmer was. I would be willing for the re-establishing of such a paper to-day. I think I could get quite a large subscription to start such a paper.

Mr. SMITH: With regard to the original resolution I would simply say, I drew it simply to get the subject before the convention, and to get the people to thinking about a paper. We all know we need a paper—I have been ashamed every time I think of it, that a paper like the Wester Farmer was allowed to go down. I don't think the people are altogether to blame for it. I know a good many who, if they had known the condition of the paper, would have advanced the means to sustain it and put it beyond the possibility of failure. I know there is a feeling among the friends with whom I have conversed, that they would be very glad to get Mr. Morrow back. I am not certain that that could be done, as he

Digitized by Google

was expecting another position which, if he gets, will be a permanent one for many years to come. He was expecting to leave the Western Rural. Whether he has taken that place or not I do not know. In regard to the project of Mr. Orledge, I have nothing to say. I don't know but the gentleman whom he has in view would be just as good as Mr. Morrow. He may be better. If we can have a paper that is purely and exclusively devoted to agriculture, I would be willing to take it. I would be in favor of one, partially, mainly, devoted to agriculture, and the balance to something else if we cannot do any better. I would prefer a purely agricultural paper. I hope something may be done before we leave—I don't mean officially, but in our individual capacities; take some steps that will help to start a paper. I, for one, am willing to pledge myself for ten or fifteen subscriptions to start with.

Mr. CLARK: What I conceive to be a perfect agricultural paper is one that should treat upon something besides planting corn, sowing wheat, and digging potatoes. We, as farmers, have other interests as well as producing crops, the transportation question, or other questions which are incidental. Politics should be treated in an agricultural paper. The Western Rural, which I am taking, takes that course. It treats fearlessly, openly, these questions, and such a paper as that is what I should like to see established in this State, not controlled by any party, but going against anything they think is wrong and against the interest of the farmer. I am not connected with any paper, don't wish to take an agricultural paper that is tied to any party, but I want an open, fearless, independent paper, that will attack monopolies whenever and wherever they exist.

Mr. ANDERSON: I am one of those who felt very sorry when Mr. Morrow told me he was going to accept a position and give up the Western Farmer. He was somewhat to blame for not receiving better support from the farmers of Wisconsin. The truth is, this paper never did come out and support us against monopolies. One of the firm had been a railroad-man for twenty-five years. I know a farmer's club in this county where there was a number of subscribers. The members read an article in this paper which caused them to withdraw their support. If that paper had been wholly with the farmers of this State, the subscription could have been doubled. I made a proposition to Mr. Morrow which would

Digitized by Google

have doubled his subscription. He advised with those opposed to progress and reform, and declined the proposition. I would have given $50 out of my own pocket rather than to have had the paper go down.

Mr. ORLEDGE: Be assured that when I speak of a paper here, I am not speaking about a paper that is go to carry you to the democratic party or to the republican party. My experience is this, that unless you get some man at the head of the paper who is in deep sympathy with you, you will not sustain that paper. Mr. Anderson has shown us why Mr. Morrow was not sustained. You will not, and cannot sustain a purely agricultural paper in this State. You must have the great economic questions of the day discussed. That is the place for them. Have them discussed from a pure, honest standpoint; put them before all parties as the questions should be put, not covering up by means of sophistry, to hide the truth, but fully exposing them, giving our enemies credit when they deserve credit, and condemning them when they are wrong. I do not ask you to support me in starting a purely political paper here. It is a thing that I am not in a position to do. I am not in a position to advocate any party. I have no faith in any party. What I want is a paper where we can advocate and argue purely economic questions, those questions that come home to us and affect our every-day-life, and where there may be a page or two pages devoted purely to agriculture, where my friend Mr. Roberts or Mr. Hazen, or any of you gentlemen will have room to put in your ideas. I should never oppose a man because he did not agree with me. I believe in freedom of speech, freedom of action, and honest straight work throughout.

The resolution was adopted as amended.

Resolution number two was then taken up, relative to town fire insurance companies.

Mr. WHITING: I have some little knowledge and some little experience in this matter. In our town we organized such a company four years ago this month. It has been in operation a little over four years, and our circumstances are the most encouraging. We started under very unfavorable circumstances soon after the Chicago fire. We have increased the amount now insured to upwards of $310,000, and we have not during the four years met with



Digitized by Google

a single loss. It is a plan by which farmers can get insurance at cost.

Mr. BENTON: I am a member of one of those companies. We met with a $1,700 loss, and it has not cost us a cent to get the whole assessment. They said, when you come to making assessments you will go down. We collected that, every cent, freely, and paid the loss.

The resolution was adopted.

The balance of the resolutions were read and unanimously adopted.

On motion, adjourned to 7:30, p. m., to meet in the Assembly Chamber.

---

EVENING SESSION,
*ASSEMBLY CHAMBER, 7:30 P. M.*

## WHAT WISCONSIN FARMING DEMANDS OF WISCONSIN SCIENCE.

BY PROF. T. C. CHAMBERLIN, BELOIT.

The professor apologized for appearing three times in succession, and also that, on account of illness, he was not able to prepare himself as he wished, nor to reduce to writing the matter he desired to present.

The speaker said he had attempted to make his topic specific. Wisconsin farming is different from farming in Maine or California, and must be made a subject of special study. He likewise limited science to that applicable to Wisconsin, so far as the discussion was concerned. Pure science is of practical value but is not included under the subject. Neither on the other hand is the science of farming of which the members of the convention are the possessors. Farmers, in so far as they are true to the principles that govern the development of truth, are true scientists, working in the field of professional science. The speaker gave as a general answer to his subject, Wisconsin farming demands that Wisconsin science shall place at its disposal all the knowledge it possesses relating to all subjects embraced in the farmer's occupation, and further that this

Digitized by Google

information should be introduced into the school-room. One reason why so many boys left the farm for other occupations was because there was not enough to interest and satisfy the active craving of their young natures for intellectual food. A different education, which should supply this craving by the study of nature, would endear many active-minded boys to the farm.

In the way of more specific answers, the value of a knowledge of the origin, nature, and means of testing and comparing soils, was alluded to. Among fertilizers we have peat and marl, a knowledge of which will soon become important. Native vegetation furnishes many useful indications as to the capabilities of the soil, and a permanent record should be made before it is too late, in the form of a map of our native vegetation. The usefulness of a knowledge of plant-life was illustrated, that being the subject of the farmers' labor. Our domestic animals were better understood, there being standard treatises on most of these; but still the subject needed to be taught in the schools. Our friends and our enemies among the fields should be discriminated, and our children taught to recognize them. The speaker urged, with emphasis, the value of the contributions of science in relation to insects, the greatest enemies of the farmer. He claimed that Professor Riley had saved more to the northwest by information given concerning the grasshoppers, than had ever been spent in America in payment of State entomologists. He claimed that thousands of dollars might be saved to the farmers of the State, by making use of such information concerning the insects of the State, as could be given. In speaking of climate and the atmosphere, he referred to the grand achievement of Wisconsin scientific enterprise in the United States Storm-Signal Service, due largely to Dr. Lapham and General Paine. He believed it would be extended around the globe, and would ultimately give farmers timely warning of approaching storms. Geology could contribute much of value directly, and much indirectly, by promoting mining and manufacturing, which he illustrated by the rich soil and magnificent water-power of Outagamie county. He concluded by reiterating his general answer, and emphasizing the need of more rational instruction in the country schools.

Digitized by Google

# HIGHER EDUCATION ON THE PROGRESS OF A STATE, OR THE PEOPLE AND THEIR UNIVERSITY.

BY PROF. J. W. HOYT, MADISON.

The professor prefaced his remarks by saying that he thought two apologies were due; one from Secretary Field for dragging him out in a poor condition of health, and when it had not been possible for him to make suitable preparation, and one from himself, for attempting to address such an audience under such circumstances, though the subject was one to enlist the best efforts of every intelligent citizen and patriot, and one in which he was greatly interested.

He began by saying he was glad the early prejudice against "book-larnin," which he found among farmers in the State when he came into it twenty years ago, was passing away. Now, the farmers of the State were among its most intelligent citizens, having an appreciation of science and its benefits to their calling and look to it for help. He endorsed the remarks of Professor Chamberlin as to what science could and should do for Wisconsin farming, and much more could be said in the same direction.

We were an educational people, greatly interested in schools, and the nation and States were taking such action that we were in a very fair way to become a highly educated people, in the highest sense. We were very earnest and active in promoting common school education, none more so, and Congress was now considering whether it should not devote the proceeds of all the unsold public land to educational purposes. The recent wars in Europe, in which Prussia has gained such victories showed the advantage of having educated soldiers "bayonets that think," and were stimulating Austria and France to efforts to secure better education of their people.

There was increasing interest in education in this country, and indications were, that soon in every State there would be established schools of every grade for the people, at the public expense.

Digitized by Google

While common education was fully appreciated in this country, higher education was not yet so highly regarded as it ought to be, even among legislators and intelligent citizens. By pertinent and convincing illustrations he showed how much science had done for industrial pursuits and those engaged in them, the improvement in farmers' implements since he swung the flail, held the wooden mould board plow, and used the back-breaking sickle, the improvements in navigation, the telegraph, etc., and traced these improvements back to the influence of scientific study by highly educated men, and showed how science with its discoveries evolved in the chambers of students, and the investigations of trained thinkers and explorers was the handmaid of industry.

He then proceeded to show the importance of schools of the highest class, and how they were the fountains from which flowed the streams of knowledge, which benefited the whole people, how they stimulated the establishment of primary schools, and promoted the education of the masses. He then spoke of the great universities of Europe, their noble endowments, their great stores of material, their large faculties of learned men, particularly qualified for the specialities in which they were called to instruct. He spoke of the great resources of our nation and of our people as a mosaic from the best peoples on the globe; a nation unequalled in glory and power, and urged the importance of more culture, more knowledge of great scientific principles, of political economy, etc. He referred to the universities of this country, Harvard, Yale, Cornell, and Michigan, and the fame which the latter had secured throughout the world in consequence of the liberal policy pursued toward it by the State.

He made an earnest appeal for a home institution, the University of Wisconsin, whose location was surpassed by no school in the world, for natural advantages, and closed with an appeal for a Centennial monument by Wisconsin in the shape of a worthy endowment of our State University, that it might have the means and resources to take rank with the best institutions of the country; have not only one able agricultural professor, but many qualified for specialities and able to do their work perfectly and satisfactorily, that the faculty might be a galaxy of stars, a glory to the State.

He advocated the passage of the bill for a tax of one-tenth of a

Digitized by Google

mill, as a permanent addition to the endowment. He closed with expressing the hope that the foundations would be laid broad and deep, of an institution that will advance the cause of education of every grade; that will promote the advancement of learning in all lands; that shall give Wisconsin just honor and fame in all States of the American Union and the world.

The remarks of Professors Chamberlin and Hoyt were listened to with great attention and interest, by a large, intelligent, and appreciative audience, and I regret that I am not able to give them in full, as the above brief synopsis does not do the speakers justice.—[SECRETARY.]

Adjourned to 9 a. m. Friday.

---

*FRIDAY, February 11, 9 A. M.*

Convention called to order by Secretary Field, in the absence of President Stilson.

Papers were read and discussions continued.

## GRASS IS KING.

BY CHARLES SEYMOUR, OF LA CROSSE.

The publicity and approval accorded to my "chat with the farmers" a year ago, on the dairy interests of this country prompted a compliance with the request for another contribution of facts and suggestions on a subject somewhat akin to that referred to; and, in so doing, it will be my humble endeavor to present some thoughts that may serve to throw some light upon the pathway of men who have too long been in servitude to transportation monopolies and middlemen, while expending their lives and substance in unrequited toil and ill-advised efforts, to raise cheap and bulky crops, whereby the soil has been impoverished, and irreparable damage has been inflicted upon an important branch of the resources of the nation.

An editor and publisher of a country newspaper has superior facilities for determining who are and who are not good farmers in the surrounding country, by careful inspection of his subscription

Digitized by Google

lists, while examining the farms of delinquent and prompt-paying subscribers.

Any postmaster can easily discern who are and who are not good farmers, within his delivery of mail-matter, by the amount and nature of the journalistic information received through his post-office. It is customary for a "spouter" to assure his agricultural auditors that "although he is not a practical farmer," he was "a son of toil," and "early inured to hardships;" but, so far as observation enables me to testify, concerning farms and farming, my testimony would sustain the idea—that the farmer who produces and uses the largest and best manure-heaps is the most successful agriculturalist; as it is evidence that he keeps more stock than machinery, raises grass instead of grain, and has the means of securing continued prosperity without impairing the strength of the land.

### GRASS IS KING.

Starting out with the proposition—"Grass is King"—it may appear that it is the duty of western farmers especially, and of American citizens generally, to recognize the unalterable decree of the Creator, and work in harmony with what is obviously designed for the welfare of individuals and conducive to national prosperity—involving a diversity of industries within and among agricultural communities, by multiplying the productive sources of public wealth.

The simple topic of "grass" will supply a base on which to stand while reaching out to other but not altogether irrelevant subjects, including roots and plant-food as side-dishes or auxiliary forces to the central power under consideration.

As a theme for enlarged discussion and treatment, it is unlimited, if we bear in mind the precept "all flesh is grass," which some might regard as equivalent to popular or suggestive of "squatter-sovereignty;" but even with the limitation of that statement to the legitimate and normal products of grass, it will be evident that, in respect to its magnitude and indispensableness as compared with any or all other sources of wealth, "grass *is* king."

### ABANDONMENT OF GRAIN CROPS.

The excellent Governor of Wisconsin, who is such an eminently

Digitized by Google

practical man as to place more reliance in the accuracy and efficiency of the sire of his favorite "short-horns" than in the predictions of the learned and scientific savant whose science did not tally with the farm register, would be justified in appointing a day of thanksgiving to a kind Providence, and the dairymen's associations of this country, in view of the agricultural statistics presented in the recent report of Hon. Peter Doyle, Secretary of State, showing that Wisconsin, according to the assessor's lists of crops, had 256,000 less acres of land under wheat in 1875 than in 1874; which is equivalent to the withdrawal of 6,650 fields of forty acres each from that disastrous crop; and the legislature of this State could not enact a more just and beneficent law than one which would, if properly enforced, compel every man, who has impaired the soil, and impoverished the land, and weakened its productiveness, to bring back an equal or greater quantity of the mineral constituents of the produce sold, and restore them to the fields from which they have been taken. The railroads should assist, by dead-heading these restoratives, as they do in returning delegates from a political convention on the certificate of the secretary.

Nature teaches mankind that we are all more or less mutually dependent, and that like cog-wheels we are pushing each other along, by filling up mutual voids in the great wheel that is propelled by the two-fold powers of divine economy and human necessity. There is, really and actually, harmony of interests.

While in Great Britain and other European countries wars and density of population have compelled both owners and tillers of the soil to develop its capacity to support both the landed aristocracy, with its standing armies, and the laboring masses, there has prevailed in this comparatively new and undeveloped country a system or practice of prodigality and profligacy, if not crimnal wastefulness or wanton vandalism, in regard to the treatment of the richest heritage on God's foot-stool, as seen in the general tendency of American agriculture to weaken the soil, by raising grain for consumption in foreign countries that require more food, occasionally, than they can produce.

We are apt to fly to the physician for remedies to correct physicial evils that might have been averted by due regard to the laws of nature for the preservation of health. We often appeal to the State and national legislatures for the correction of cramps,

Digitized by Google

fits, irregularities, fever, constipation, torpidity, nervousness, dyspepsia, or paralysis in the body politic, when the best means of relief are within our reach; or when the evils complained of could have been prevented by the exercise of even a moderate amount of what is sometimes termed "good horse-sense."

Two of these dire evils have combined to deprive western farmers of remuneration for time, toil, and substance, expended in a bad or false system of agriculture, viz: freight and wheat. The chief remedy for both difficulties is "grass." If the lamented excellent Horace Greeley, instead of directing young men to "go west and grow up with the country," had simply compressed good advice into three words, he should have said—"go to grass,"—not as Nebuchadnezzar went, to degrade humanity to the condition of the brute; but with an intelligent purpose to diversify and multiply the resources on which individuals and nations rely for happiness and prosperity.

### COUNT THE COST OF WHEAT-CULTURE.

But, before curtailing the business of wheat-culture, and turning our attention to grass, let us be sure about the unprofitableness of the former, and the profits of the latter; and to this end let us descend to particulars verified by experience. On the smooth and rich prairies of Illinois, the estimated minimum cost of seed, labor, harvesting, and marketing wheat per acre, is over eleven, and about twelve dollars; which, at the rate of twenty bushels per acre, is sixty cents per bushel; at the rate of fifteen bushels per acre, is eighty cents per bushel; and at the rate of twelve bushels per acre, is one dollar per bushel. Those are the most favorable conditions imaginable, in respect to fertility or productiveness, competing railroads, labor-saving machinery, choice of markets, climate, and labor. In Wisconsin, Minnesota, Iowa, and Nebraska, the cost of production will scarcely fall short of fifteen dollars per acre for wheat, and costing a dollar per bushel; which is above an average yield, and an average price, during any ten consecutive years. Examine the figures carefully.

| | |
|---|---|
| Actual cost of plowing one acre properly | $2 00 |
| Market value of two bushels best seed-wheat | 2 50 |
| Sowing, and harrowing twice, by approved machinery | 75 |
| Cost of harvesting and stacking per acre | 3 00 |

Digitized by Google

| | |
|---|---|
| Threshing fifteen bushels, (labor, teams, and board, 12 cents) | $1 80 |
| Cleaning and hauling wheat six miles to market, 6 cents | 90 |
| Interest, 10 per cent., on land and improvements pro rata per acre, worth $40.00 | 4 00 |
| Total cost of wheat per acre, say $1.00 per bushel | 14 95 |

To this add one-thirtieth of the working portion of a man's life, and the damage done to the soil by extracting indispensable constituents of fertility or productiveness, which must be restored, under serious penalties for neglect, and where is the profit of wheat-culture? Wisconsin, Minnesota, and northern Iowa, send through Milwaukee alone, about thirty millions of dollars worth of wheat annually, at a loss.

The expenses of a farm are not materially different, whether little or much is harvested. The cost of preparing the ground, seeding and cultivating it are the same for a poor as a good crop. The expense of harvesting a light crop may be less than that of a large one, but in other respects, the expenses are the same. In some instances it is more expensive to cultivate and harvest a mean crop than to raise and gather a good one. In regard to stock-raising, it is far more expensive to raise a poor animal than one of excellence. But we will consider the wheat crop in its better results as determining the value of the land devoted to its culture. If it costs about one dollar to raise a bushel of wheat when the crop averages from thirteen to fifteen bushels per acre, and no profit or loss is the result, except damage to soil, it must be apparent that a crop of twenty bushels per acre will yield a net profit of say six dollars, which is equivalent to a dividend or profit of eight per cent. per annum, on sixty dollars which is the cash value of the land per acre. If the crop can be carried up to twenty-six bushels per acre, when wheat is worth one dollar per bushel, the actual net profit of twelve dollars per acre will be equivalent to a dividend of ten per cent. per annum, on one hundred and twenty dollars per acre. The enterprising and exemplary farmer who properly raises sheep, cattle, and horses, to the full capacity of one-half of his farm, and applies their manure to the enrichment of the whole farm, will be likely to realize the benefits expressed in the calculation made on the basis of making land yield a net income of eight per cent. clear profit on the half of the farm devoted to grain-culture, and possibly, may

Digitized by Google

also derive equal benefits from the stock, or other half of the farm, which has, in this case, been playing second fiddle to the grain or wheat-fields. If, however, this same farmer had devoted the entire farm to stock and dairy, and bought his wheat from the nearest idiot who is in the wheat-growing business exclusively, the result, under first-class management, would be that the yield or net profit (apart from the increase of stock, which, of itself, is worth more than the entire profits of the farm under the simple or exclusive wheat-treatment) of the whole farm, would represent a sum per acre greater than that which is expressed in the estimated revenue of a wheat crop of twenty bushels per acre, which is only attainable, without robbery of valuable constituents in the soil, by a high and honorable system of cultivation.

The wheat-culture of the west, like the cotton and tobacco-culture of the south, has impoverished the soil and diminished its productiveness to a serious degree; but the south had this advantage over the west—that one pound of its products would sell in the markets of Europe or America for more than could be realized from ten pounds of western cereals; and, therefore, with easy access to and by river and ocean navigation, could be delivered at any of the seaports or large markets of the world at less cost than western farmers incur in sending wheat and corn across a single State by land transportation. It is far easier to keep the body in health by a proper observance of the constitutions upon which it is enjoyed, than to restore shattered conditions, by a liberal use of buchu, or by compulsory abstinence from strong and nutritious diet. The soil seems to possess many of the qualities of human nature; as it returns generous benefits for good treatment, and dispenses its favors most liberally to its best friends; and, like a genuine Irishman, while it literally "kicks up a dust" under prolonged abuse, especially if kept too long under the influence of rye, hops, tobacco, or other exhausting and debilitating aliens to sound agriculture; it never seems so lovely and glorious as, when "wearing the green." Land, like man, may lose that tone, equilibrium, or vitality which is necessary to imbibe or derive strength from what, under better circumstances, might contribute vigor and restore soundness. Dyspepsia is only a "flag-station" on the road between health and death; and the sterility, barrenness, or unproductiveness of land that has long been ill-treated, should admonish everyone that

Digitized by Google

sources of wealth can be extinguished as effectually in the soil as elsewhere. The penalties for this crime against nature are not only visited upon the ungenerous and improvident robbers of earthly treasures, but they fall upon their children and their children's children to a thousand generations. Poverty, imprecations, and curses are their portion, instead of that blessed "repose of soul" and honored memory, which followed those who left the world in better condition than that in which they found it.

### A CHANGE OF PROGRAMME.

Suppose the farmers of the west, after taking an account of stock, and figuring up the results of past bad management, should send to the operatives in the work-shops and manufactories of Europe kindly greetings, setting forth the following

### FACTS.

DEAR FRIENDS:—We have faithfully and diligently endeavored to carry out the programme or scheme devised by the common carriers and middlemen of America and Europe, who so kindly offered to effect exchanges of the products of our industry, and we find there is too much friction in their complicated arrangements. Our soil, which could once be relied upon for the production of forty, thirty, or twenty bushels of wheat per acre, complains of general debility; and the carriers have, with the warehousemen at Milwaukee or Chicago, and at Buffalo, Oswego, or Ogdensburg, and at New York or Boston, and at Liverpool, London, or Glasgow, and elsewhere, together with the commission agents and insurance companies, found it necessary to take one-third of our crop for transporting the remainder to your markets. They also charge us roundly for bringing your manufactures to us.

The wheat crop, under favorable auspices as to weather, averages scarcely fourteen, and in some years and certain localities, does not reach ten bushels per acre; and the cost of production leaves us no margin for profits. We have imported guano and other fertilizing agents from the distant islands of the Southern Pacific Ocean, on the opposite side of the globe; but unless we raise cattle and sheep to enrich our soil, and curtail our efforts to exhaust the land with grain crops, we shall not be able to keep the wolf from our doors. The bonds which we gave as subsidies in aid of railroads that we

Digitized by Google

expected would reduce the cost of transporation, and are coming due in gold with interest, sold for only seventy cents on the dollar; and their buyers paid for them in iron rails of very inferior quality at $100 per ton, when a better quality of iron could have been bought for $65 per ton in cash; so that our bonds only realized about fifty per cent.; and as the railroads were built by construction-companies, composed of the directors and officers of the roads, at thrice their actual cost, besides other leakages and rat-holes in the concern, we have concluded that the railroad and wheat business, although fun for the carriers and middle-men, is death for us. Even if otherwise disposed, our facilities for subsidizing more railroads are now crippled by a constitutional amendment which limits our municipal indebtedness to five per cent. on the assessed value of property subject to taxation.

Now, friends, what is to prevent us from uniting to save the cost of ten or twelve thousand miles of transportation, by getting your work-shops and our farms into close proximity? There is no revenue, tariff, or customs' duty, except in New Jersey, levied on importations of live Englishmen, Welshmen, Scotchmen, Irishmen, Germans, Norwegians, Swedes, and Frenchmen; and while you will be enabled by coming to America to get many more and much larger loaves of bread for your day's work than in Europe, and be invested with the elective franchise and numerous other privileges, we shall also gain, on the old slave-labor valuation, from one to five thousand dollars, by the acquisition of every able-bodied immigrant according to the size or number of his family; besides having, in common with you, the manifold and reciprocal benefits of a remunerative system of diversified industry, without the friction of long and expensive transportation in effecting exchanges of the products of our labor and skill respectively.

Fraternally yours, for butter and cheese,

WESTERN FARMERS.

REPLY.

WESTERN FARMERS:—Your condition is deplorable. We supposed you were taking advantage of these great natural highways of commerce, and were happy and prosperous. Why do you not vary your course in farming, by using your bulky crops in raising cattle and sheep, which will not only fertilize your soil, but yield

Digitized by Google

remunerative returns in dairy products, meat and wool? Instead of confining yourselves to wheat, which we can get from the Baltic cheaper than from America, send us cheese, which is more nutritious and desirable for food than any other article, and for transporting which to the European markets only one-twentieth of the shipment will be exacted by the carriers. If you send butter, the carriers will only exact one-fortieth of the shipment for transportation. England raises about 95 per cent. of the meat consumed by her population; and it is of a superior quality to that sinewy stuff which occasionally comes from the rinderpest districts of America.

Even the fine and coarse wools we manufacture into cloths for consumption in America, come chiefly from the cheap grazing-lands of Australia and South America; and you had better pay more attention to hearty and hardy sheep, of large frame and heavy fleece, adapted to the production of flesh for eating, and wool for the coarser and heavier fabrics required in your cold climate, bearing in mind that a sheep pays his way well as a fertilizer, or a machine for converting under-brush, stubble, roots, coarse hay, and straw into manure, especially if your land needs resuscitation after an exhaustive process of grain-culture. Instead of shipping maize, which will cost more for freight than production, send pork, which will be required in moderate quantities for the army and navy and sailors, as only about one-sixth of the pork shipment will be consumed by freight. We love our homes and kindred so well, that it is difficult to sunder the ties of either; and as Mr. David A. Wells, of Connecticut, and Mr. Horace White, of Illinois, who were recently in Europe, assure us, that America is moving rapidly and steadily toward a commercial system which shall equalize the value of labor on both continents, we prefer to remain in our own native country, provided you will feed us with cheese, of which England annually demands one hundred and thirty millions of pounds in excess of production, amounting to thirteen millions of dollars at ten cents per annum; or say twenty millions of dollars at fifteen cents per pound; while Germany requires much more, for its population have a higher appreciation of cheese as a nutritious and economical article of food. It is the luxury of the rich, and the food of the poor.

British farmers pay to the landlords annual rent equal to the total value of American land. The subdivision of lands in France

Digitized by Google

has filled the country with a countless number of small and narrow strips of land, which is highly cultivated and yields a great variety of rich crops; but in that country, as in other populous countries of Europe, land is almost too valuable for such extensive grazing operations as your country is capable of maintaining. Why do you not follow the example of those New England and New York farmers, who are acquiring wealth by dairies on soil that is almost worthless for grain crops? Instead of wasting your time and substance in raising wheat, why do you not devote your attention to efforts to resuscitate and re-invigorate your soil, and raise less bulky and more valuable products, that will bear transportation and yield you remunerative profits, without impoverishing, but with the enrichment of your farms?

So, good friends of the west, please discontinue your ill-advised operations in wheat, which averages twenty-six bushels to the acre under British farming, and do not ruin yourselves on our account.

Very truly, yours,

EUROPEAN OPERATIVES.

Whether international courtesy permits such plain talk or not, there would be in it more truth or friendship than poetry.

### ADVANTAGE OF DAIRY AND STOCK OVER GRAIN.

When we see the dairy and stock-farmers of New England, New York, Pennsylvania, and Kentucky, with inferior lands, of comparatively little value for grain-culture, enjoying a degree of prosperity that is unknown to the great bulk of western farmers who are engaged in an unprofitable and unequal competition with Russian serfs for supremacy in the grain-markets of England, we may well conclude there is something wrong in our system of agriculture. The farms of the dairymen and stock-raisers are not mortgaged to secure the payment of debts incurred in the purchase of farm machinery; as their cattle, sheep, and horses assist in harvesting the crops. The dairymen and stock-raisers are not compelled to hire labor at high-pressure prices in the harvest season to gather their farm products with expensive haste. The dairymen and stock-raisers do not find at the end of the year that the productiveness of their farms has been diminished or impaired; but, on the contrary, that their land has been strengthened by the season's opera-

Digitized by Google

tions. The dairymen and stock-raisers are not compelled to put a codicil to "the Lord's Prayer" by supplicating a merciful Providence to send famine or war upon Europe, and thus stiffen the markets for breadstuffs that have been raised upon land that is constantly declining from fertility to sterility, under the unfair treatment of *incumbents* instead of the generous management of *farmers*.

The dairymen and stock-raisers are not subjected to the inconveniences, contingencies, and hazards of unpropitious weather, capricious markets, and extortionate transportation, to which the wheat-growers are exposed, and with which they are familiar; for the great staple—grass, on which the former rely chiefly as food for their stock, is measureably secure under all conditions of weather; is not troubled by chintz-bugs, weevil, or rust; thrives best when sprouting in the shock or stack; and the products of the dairyman's farm can be transported to market for one twentieth of the cost of freighting the same value of grain-crops.

In every point of view, and under all circumstances, the acre of grass will yield a larger profit with cows and sheep as harvesters, than an acre of wheat cultivated and harvested by the most approved machinery, and skillful laborers.

The difference between the dairyman and the grain-grower is, that in one case, the farmer runs the farm, and in the other the farm runs him.

Let us examine results of dairy and stock-farms in America, under what, by contrast between shabby and decent systems of farming, we are accustomed to consider as sound agriculture, but which, when compared with the higher standard of European agriculture, we shall be compelled to admit, is far from perfection. Let us consult some distinguished, successful, and practical dairymen and stock-raisers, who have imparted much valuable information in regard to dairies and farm-stock.

### GRASS VERSUS GRAIN IN WISCONSIN.

Commencing nearest home, with a farmer of La Crosse county, we will endeavor to glean, from various reliable agriculturists throughout the country, some facts that should be put on record for the benefit of all who may not have had access to the best sources of information on these matters.

Seeking shelter in a log house, in a narrow valley between the

Digitized by Google

bluffs of what was then the town of Neshonoc, as night overtook me, while running out some land boundaries eighteen years ago, it was my good fortune to make the acquaintance of a thorough-going Scotchman, who brought to this country, besides an excellent Scotch wife, a practical knowledge and a high regard for that honest and judicious system of agriculture which one sees in the better portions of Scotland, such as Perthshire and Sterlingshire, where the country resembles the rougher districts of Wisconsin. Finding himself cramped, this Scotch farmer moved to larger fields, which he cultivates to the extent of about one thousand acres, cornering in the two towns of Farmington and Holland, on which he has a first-class "whole-milk" cheese factory, in care of a daughter who is worth her weight in gold, and a first-class flouring and grist mill, with all the modern appliances for making patent flour, etc. This farmer, dairyman, and miller, named James Barclay, assured me last week, that an acre of grass, yields greater profit than an acre of wheat, without reference to the factory or mill profits; and the grass lands are growing stronger, while the wheat fields required great attention to prevent them from becoming weaker.

Mr. Barclay estimates the cost of carrying a cow through the winter at fifteen dollars, and sets apart an acre and a half of grass for sustaining each cow during the grazing season, which he figures at fifteen dollars more, allowing ten dollars per acre as a liberal price for his grass. He gets an average income or revenue from each cow equivalent to four hundred pounds of cheese, which, at the moderate price of ten cents, is forty dollars. Computed at the eastern price of fifteen cents for cheese, the net return would be sixty dollars. His estimates of cost of wheat-culture do not vary much from these already specified. His testimony is decidedly in favor of grass. These results are given as a fair test under the good old-fashioned open-air grazing system of stock-feeding; and, although they present a favorable view of grass as compared with grain, we shall see that the first-class dairymen and stock-raisers of New England and New York begin where the best class of western farmers culminate or leave off; and that they treat cows and sheep as machinery for converting crops into milk and wool; and that instead of trying to see how cheaply stock can be carried through the year, they strive to see how much food can be pushed into and through their cows. The more, the better.



Digitized by Google

Colonel Warner, of Dane county, Wisconsin, informs me that from his field of one hundred and seventy acres of wheat, in 1874, after a visitation of chinch-bugs, he realized only thirty dollars, or seventeen annd a half cents per acre.

Mr. Stephen Favill, president of the Wisconsin Dairymen's Association, says: "The question of whether the dairy can be made profitable in Wisconsin, has already been settled. Those who have had access to the balance-sheet of the dairyman know that no branch of farming has paid as well for the past eight years as the dairy, and we think the question of the future dairy-interest in Wisconsin will depend largely upon the amount of brains we put into it. If we undertake to run in a slop-shop manner, as we do much of our other farming, it will prove a failure. On the other hand, if we intelligently care for and foster it, we may rely upon good financial returns. The natural advantages which we enjoy over the eastern and older States are cheapness of land, cheap coarse grain and mill-feed."

### VERMONT DAIRIES AND STOCK.

And now let us glance at the dairy and stock-farmers of Vermont; where it is said neither Scotchmen or Jews can exist. With lands that almost put humanity at defiance, and which western farmers would regard as of little value, the Vermonters have been successful with grass-crops, which are manufactured into butter, cheese, meat, and wool. Some of the flock-masters of the Green Mountain State, have obtained distinguished reputation, and fabulous prices for raising fine merino sheep, which have been sent to all parts of the United States. When we consider the fact that the fleece of the common sheep averages only from five thousand to five thousand and five hundred wool hairs to the square inch, and that some of these highly bred sheep of Spanish blood, have from thirty thousand to forty-eight thousand wool-hairs to the square inch; and that the ordinary fleece of sheep in Texas weighs only about two pounds, while these wrinkly merinos under Vermont management, yield fleeces averaging over six pounds, while premium bucks exceed twelve pounds, we are enabled to comprehend the value of sheep-culture in its highest form; but, even if the sheep produced no wool, they would not be abandoned by a good farmer, for they pay their expenses as auxiliary forces in keeping the farm in order,

Digitized by Google

and for meat and tallow. The Vermont Morgan, and Black-Hawk horses, also commanded high prices in the larger cities of the east; but both sheep and horses are less profitable than the dairy; and to this branch or system of agriculture, special attention is now given.

From the proceedings of a recent meeting of dairymen at Rutland, Vermont, it appears Hon. E. D. Mason, president of the Vermont dairymen's association, derived from the product of his cows, made into butter and cheese, eighty-three dollars and sixty-three cents per head in one year. The last annual report of that association contains a statement of Mr. C. A. Crampton, in East Swanton, Vermont, who, besides supplying his family of thirteen persons with milk, cream, and butter without stint, and packing one thousand pounds of pork for family use, sold from the product of twenty-one cows 5,871 pounds of butter, at nearly 35½ cents per pound,

| | |
|---|---|
| Which realized in cash | $2,081 16 |
| And for pork sold | 250 00 |
| Making a total of | 2,331 16 |
| Less cash paid for grain for cows and hogs | 483 09 |
| Leaving net results | 1,848 09 |

Or equivalent to $88 for each cow.

### NEW YORK DAIRIES.

From the proceedings of the American dairymen's association we learn, on the authority of Professor Willard, of Utica, New York, that in Herkimer county, native cows of his own herd had produced milk that averaged six hundred pounds of cheese per cow in a season; and Mr. Fish made eight hundred pounds of cheese per cow, under high feed, with good selected cows.

When we consider the average yield per cow from the two herds of cows whose milk is made into cheese at Mr. Barclay's factory, in connection with similar results elsewhere, we shall be ready to accord to him the honor of maintaining a respectable average.

Prof. E. T. Wickson, for many years president of the dairymen's board of trade at Utica, New York, and now transferring his usefulness to California, has stated the average net return per cow to patrons, of over ninety cheese factories, which received the milk of more than thirty-six thousand cows, located in different parts of the State of New York, at thirty-nine dollars and fifty-seven cents

Digitized by Google

per cow—the highest average from best dairies being $55.07, and the lowest $31.22, during the factory season of 1874. These figures based on actual results of dairy operations under varied circumstances, supply a tolerably accurate estimate of forty dollars as the average revenue or income per cow under fair, but not extravagantly careful management. The average net return to farmer patrons of the factory in New York was $1.20 per 100 pounds of milk. In the factory reporting the highest average per cow, $55.07, the selling price of cheese averaged net, fourteen and eleven hundredths cents per pound, and the milk taken was nine and seventy-six hundredths pounds to a pound of cheese. The average of all the highest dairies reported is, $50 per cow. The best season's average of any of these dairies was $82.17 per cow.

The milk-producers and the cheese or butter manufacturers have separate interests. The cow that yields the greatest quantity may give the poorest quality af milk, and *vice versa*. If the farmer, with a dairy of twenty, thirty, or forty cows, seeks his own advantage exclusively, he will select or breed stock with reference to the branch of dairying to which he gives a preference—either for cheese, or butter, or sale of milk. If, however, as is the case with nearly all dairymen, the farmer finds that, in spite of the utmost care, great disparities occur in the milking qualities of his herd, it is obviously his true policy to have such a classification of his cows as he can make from actual tests, and sell to the factories the milk from cows that yield the greatest quantity, and make into high-priced butter the milk of superior richness. The point up to which the true dairyman will endeavor to bring his entire herd, is three hundred pounds of butter, or six hundred pounds of cheese for each cow per season, and this product is not unreasonably large or unattainable. In round figures, at low eastern prices, cheese at fifteen cents, or butter at thirty cents, it would be worth—say ninety dollars.

### EXTRAORDINARY RESULTS.

Remarkable instances are recorded of enormous results in milk production, as compared with the average product of cows in ordinary herds under common treatment, which is estimated at only about one hundred and twenty pounds of butter each, per season, valued at $30 to $48, according to prices realized, ranging from

Digitized by Google

twenty-five to forty cents per pound. Mr. Bussey, of Macedon, New York, figures the proceeds of a small dairy of four cows (including sales of pork, calves, and butter) at $129.42 for each cow in one season. They were fed on grass until the latter part of November, and wintered on clover and potatoes. An Alderney cow of Mr. Andrews, of Bethany, Connecticut, gave milk that produced over one pound of butter for four quarts of milk; while the ordinary allowance is twenty-five pounds of milk for one pound of butter. Mr. W. B. Sweet, of Pompey, New York, has taxed the credulity of everyone by stating that he had a short-horned cow, fed on clover-hay, and four quarts of mixed oat and barley meal, that produced forty-two pounds of milk per day, which made seventeen and a half pounds of butter per week, which at thirty cents per pound, would be $5.25 per week, or over $200 per season; but, as this statement is generally received with distrust, we will merely count it as a "short-horn" story. But here is a better one. Mr. Beebe, of Wayne county, New York, made people's eyes open widely at the statement about his cow—a cross of Durham and native—which was milked three times a day, yielding thirty quarts or sixty pounds of milk daily; and from which in four weeks he churned ninety pounds of butter. If valued at thirty-five cents per pound, ten months of this work would yield $270 for her butter in one season.

Mr. C. M. Morgan, of Cuba, Alleghany county, New York, shows by an account with a cheese-factory for the season of 1874, that from a dairy of sixteen cows he sold one hundred and fifteen thousand and forty-seven pounds of milk, averaging four hundred and seventy-three and one-half pounds per day, or seven thousand one hundred and ninety pounds per cow for the season, for which he received $1.26 per hundred pounds of milk, or a total of $1,449.45, being an average of $90.59 per cow. This dairyman keeps no cow that does not come up to his standard of profitable productiveness. He is a liberal feeder, and during the dairy-season gives his cows a slop of one part of corn-meal and three parts of middlings. Possibly he might not select or keep the same cows if he made butter, in making which, a New Jersey farmer has realized $96.15 per cow during the season, while selling his butter at forty cents per pound.

Digitized by Google

### SALES AT EASTERN FACTORIES AND DAIRIES.

During the last month of December a dairyman at Smyrna, New York, stated in the columns of the New York Tribune some valuable facts, which, condensed into a nut-shell, represent that the milk-producers in that region sell their milk to the butter-factories on the basis of twenty-five pounds of milk allowed for one pound of butter; five cents per pound is then deducted for making, freight, commission, and for selling. That would be four pounds of butter for every hundred pounds of milk. If butter sells at 30 cents the net is 25 cents = $1 per hundred pounds milk. At 35 cents it gives them $1.20 per hundred pounds of milk, and so on. If sold to the cheese-factories, they allow ten pounds of milk to one pound of cheese. Two cents is allowed for making, furnishing, and selling. If cheese sells at 14 cents, the net is 12 cents = $1.20 per hundred pounds milk. The same paper gave the butter quotations for the season from May 5 to December 1, 1875, as follows—which are from 3 to 5 cents below "State selections." The prices for "State dairies," from "common" to "fine," were—May, 14 cents to 22 cents; June, 22 cents to 28 cents; July, 22 cents to 28 cents; August, 27 cents to 30 cents; September, 29 cents to 30 cents; October and November, 30 cents to 31 cents. This will serve as a general sketch of the dairy-market; as cheese will keep along about one-half of the butter price.

### WESTERN DAIRY-PRODUCTS IN DISREPUTE.

But, in comparing eastern and western dairy earnings, it is humiliating to be compelled to acknowledge that eastern dairy-products are quoted in the market reports at about fifty per cent. above western products, because of the prejudice existing against western slovenliness and negligence. So strongly has this disgrace been fastened upon the west, that a package of the best "Orange county" butter, if branded as the product of any western dairy, could not be sold in any city, east or west, for more than one-half or two-thirds of the price paid for the same butter correctly branded; and none of the genuine "codfish" in the eastern cities could be induced, under any conceivable circumstances, to lubricate their "inwardness" with what they are accustomed to regard as "western grease." It should be the first endeavor of western dairymen

Digitized by Google

to wipe out this stigma; and, by adopting the best modes of making butter and cheese, and aiming at the highest standard of excellence, to place the dairy-products of the west in the "dress-circle" of the dairy markets of the world. There is almost as much wit or skill displayed in marketing as in making butter and cheese. A reputation for neatness must be first established; and after the utmost care has been observed to make a perfect article, there must also be careful handling, and avoidance of rough transportation or unsightly packages. If water transportation is available, by all means, avoid the jolts of land transportation for both butter and cheese. The item of transportation alone, even in New England and New York, is one that affects the market-value of these dairy-products in New York and Boston. So important is it in the British markets to have these articles presented for sale under favorable auspices, that English importers of American cheese repack it in neat and sightly packages, which are designed to conceal the fact that it came from a land where cute and cunning dairymen are not satisfied with fair profits, but try to sell skim-milk cheese on the reputation of honest dairymen, who established a market for whole-milk cheese of excellent quality.

### APPORTIONING STOCK TO LAND.

As to the capacity of land to sustain cattle and sheep, it is a tolerably safe rule, that an animal eats in proportion to his or her weight; and we may assume that a sheep or cow will eat three pounds of hay per day for each one hundred pounds of live-weight. A merino sheep, in an average flock, weighs about two-thirds of a hundred pounds, and will consume about two pounds of hay per day, or its equivalent in grass. This is equal to seven hundred and thirty pounds per annum; which at a cost or value of $5 per ton, is, say $2. One acre of land should produce not less than two tons of hay, worth $10; and this may be safely considered as the upset cost of feeding six sheep for a year. Their fleeces should be worth (at thirty cents per pound for six pounds each) $9. The increase of the flock will certainly square their board-bill, and leave the farm enough better and richer for their droppings to credit the sheep with a good share of the resources for the next year's business.

Ordinary estimates allow ten such sheep per acre of grass or pas-

Digitized by Google

turage. That is, however, reducing the sheep to "short commons." The larger and coarser-wooled sheep of double weight will consume more food; and will, perhaps, yield less revenue. A farm wholly devoted to sheep-culture would probably be richer than its owner. There is no such a thing as too much gravy on our parsnips. Cows averaging one thousand pounds each, for decent subsistence, without being fed so generously as a good dairyman will feed, require thirty pounds of grain or hay, or its equivalent, per day; and this will be nearly five and a half tons per annum, which, at five dollars per ton, amounts $27.50.

If oil-cake, corn-meal, potatoes, turnips, sugar-beets, sweet-corn, or other substitutes or auxiliaries to grass-food are supplied, all the better for land, and cattle will be the variety; but the chief reliance must be grass, which forms the basis of our calculations of expenses in supporting stock. The capacity of the land being thus under fair and moderate treatment, adequate to the support of five to ten sheep per acre, or one cow to less than three acres, it is a very safe apportionment of stock to land to make a farm of one hundred and sixty acres, three-fourths of which, should be devoted to grass, carry a dairy of forty cows; which at the standard named of six hundred pounds of cheese, or three hundred pounds of butter per season, for each cow, would yield, at the rate of twelve and a half cents per pound for cheese, $72.50 per cow, being a total of $2,900; or at the eastern price of fifteen cents, it will be the same as thirty cents for butter, $90 per cow, being a total of $3,600. Between the cost of maintaining such a dairy ($1,100) and these aggregate results, there is a wide margin of $2,500, which will defray the expenses of labor, interest, extra feed, repairs of buildings and fences, and leave the farmer in possession of pork, beef, veal, breadstuffs, vegetables, etc., for family use, besides the improvement of soil, and increase of its value by augmenting its productiveness. The products of his farm are in such compact shape as to bear transportation to domestic or foreign markets; are not subject to serious fluctuations; are in growing demand; are readily convertible into cash; and leave the farm and farmer in better condition at the end than they were in at the beginning of the year.

Digitized by Google

STOCK-RAISING.

As to raising of cattle for beef, while such vast grazing fields are available in the southwest, the western farmer should make that branch of his business secondary to the dairy; while sheep should be treated as auxiliary to the dairy, by the same process that compels a farmer to keep both a pitch-fork and a table-fork; or on the same principle that his wife requires both sheers and scissors; or that husband and wife have use for both a scoop-shovel and tea-spoon. The sheep trim, dress, and nourish all portions of the farm; while the larger and more valuable machine commonly called a cow, converts the bulk of the staple crop into milk, and the farmer manufactures it into cheese and butter, or lets the factory do it for him.

HORSES.

In regard to horse-raising, except of choice and fine-blooded or racing-stock which requires much intercourse and familiarity with sporting-men and vicious jockeys, whose opinions are nothing unless backed up by a wager, there are so few chances of drawing prizes, after five, six, or seven years of expensive training of animals, that promised, when young, to be "Dexters" and "Goldsmith Maids," the profits are uncertain and capricious, depending more on representations than merits.

In order to show what can be accomplished by breeding in any particular direction and for a specific purpose, it is only necessary to refer to the fact that there are more trotting-horses to-day that have a record inside of the twenties than there were twenty years ago inside of the forties; and from the present racing-stock there will be produced horses that will get down to two minutes.

The most successful horse-breeder I ever knew was a New Hampshire farmer, whose wife made excellent butter, while her husband sold his two year old colts in the pasture after half an hour's race among a dozen noisy boys who tried in vain to catch the old man's gay young "racing-stock," which he desired to sell at that young age "because he was too clumsy to break such quick colts." With tails flourishing like plumes over their backs, and with nostrils distended while snorting defiance to their pursuers, these "two-year-olds" would command ready sale at high prices; but when they became mature horses and mares, not one in a dozen would be worth

Digitized by Google

a hundred dollars. In social life, too, we often see young folks kiting about as if they were surcharged, with vitality, energy, and strength, who, upon being called into requisition for active service, are unfit for either harness or saddle, and neither win a race or carry a burden, except in their stomachs.

And yet, the horse, as regarded in the blue-grass district of Kentucky, or on the green hills of Vermont, or amid the rich verdure of England, where he is the companion of ladies and gentlemen, as the donkey is of the huckster, becomes almost human in point of intelligence, indispensable in respect to usefulness, convenience, and pleasure, and a source of profit to the breeder, who regards pure blood, pure pedigree, and exemption from disgrace of any name or nature, concerning this noble animal that has received his watchfulness and attention, with as much jealousy and care as he would evince in guarding the good name of family and kindred. Never so gentle and proud as when handled by ladies of refinement and gentleness; never so reliable and faithful as when reared from colthood to trust implicitly in the kindness of every man, woman, and child who have access to him; sharing the courage of his rider in the battle-charge or fox-hunt; exerting his strength in conveying burdens, or winning a prize in the race; and often with intelligence superior to that of his befuddled master, the horse, from Bucephalus down to Morgan, Messenger, Black-Hawk, and Hambleton has been so thoroughly identified with man's interests and pleasures, that it seems almost "the unpardonable sin" to abuse this willing servant, this useful friend, and this valuable acquisition—a fine horse. The man who would degrade a horse by harnessing and working him, side by side, with a blasted, treacherous, tricky, condemned, long-eared, and downcast mule, would, if not restrained by public ordinances, utilize the phosphates of a cemetery by converting it into a hop-yard. So, while discouraging the ordinary farmer from large attempts to raise fine horses, it shall not be said that I disparage or underestimate their value; but to insure success in this branch of stock-raising, the breeder must give so much attention to it, that he will necessarily be deprived of the requisite time and means for the successful prosecution of other and more profitable departments of agriculture.

Digitized by Google

THOROUGH-BREEDING.

Breeders of fine stock understand and certify to the importance of breeding only from choicest animals, especially for those that possess the best and strongest hereditary qualities. Blood is of the first importance; and the longer the ancestry and the more perfect the type, the stronger will be the transmitting power. This line of hereditary worth, if interrupted by a low-bred mongrel on either side, or of either sex, will be so damaged as to require careful breeding for several succeeding generations, to restore the integrity of blood and tone of character which are impaired by the unworthy interloper; just as the good name and noble qualities of a family that has won an enviable reputation for many successive generations of untarnished honor, and brilliant achievements, is tainted for a century by martial alliance with some miserable sneak, who wriggled himself into good quarters, under the disguise of a gentleman; or with some disgraceful slattern, whose borrowed tresses and fashionable attire helped her to reach the position of a lady.

On the well-established principle that it is impossible to find a man of solid character, of able body, and of vigorous mind, unless begotten of a mother of sterling qualities, it is deemed important, by breeders of choice dairy-cows, that the mother of both male and female animals in use should have been cows that gave large quantities of milk; and that the sires of the calves that are intended for dairy-purposes, should be under three years of age, after which their usefulness will be less valuable for the dairy than for ordinary cattle-raising operations. The chief care of the successful breeder of dairy-stock, is to keep constantly in view the hereditary milking qualities which he seeks to perpetuate, without coming in contact with any taint of blood, or diminution of integrity, that would weaken or lower the standard from which he started, or at which he aims, in laudable efforts, to build up a dairy of the greatest productiveness and excellence.

This will explain why cows are sold at from thirty to forty thousand dollars each. They are not freaks of nature and results of accidents; but, on the contrary, the product of long, accurate, and skillful breeding.

Digitized by Google

CHOICE OF BREEDS.

As to the choice of breeds for dairies, men of good sense and much experience will differ. If any one would hear honest and hot differences of opinion, touching the respective merits of the several popular breeds of cattle, let him attend an exhibition of the Royal Agricultural Society, of Great Britain, where celebrated and successful breeders, of fine stock exhibit their trophies of breeding-skill.

Daniel Webster preferred the "short-horns," which he sandwiched between compliments for Devons and Ayrshires. Lt.-Governor Hyde, of Connecticut, the champion breeder of Devons, is quite sure they are all that can be desired, and claims that few breeders of Devons were "high-feeders," while the owners of Ayrshires feed high; and that much of New England territory, is incapable of sustaining the short-horns. One of his Devons, Gem one hundred and fifty-four, made one hundred and thirty-six pounds of butter in sixty days—averaging over two and a quarter pounds of butter per day, during which time her feed was two quarts of corn-meal and the ordinary pasture. Another of his Devons, Beauty twenty-five, yielded milk in ninety-five days, that made one hundred and ninety-five pounds of butter—averaging over two pounds of butter per day. He knew one Devon breeder who could produce a pound of butter from five quarts of milk.

Mr. Bloomfield, in England, has found no one to accept his challenge to milk forty Devon cows against the same number of any other breed owned by one man.

Hon. Harris Lewis, of Frankfort, New York, president of the New York State Agricultural Society, puts the Jersey cows at the head of the list. (When breeders speak of Jerseys they include the Alderneys and Guernseys, as they form one family or breed of cattle on the three islands of those names on the east side of the British or English Channel, near the coast of France; and being isolated or cut off from communication, by land, with other breeds of cattle, have, by a long and close process of thorough-breeding, with special reference to production of milk for butter and cheese, which were the most exportable products of those islands, become small, and are almost cream-jugs, or jugs of cream.) President Lewis places the Devons next to the Jerseys for butter, and espec-

Digitized by Google

ially valuable for oxen. "The Holsteins," he says, "are great milkers and tremendous feeders."

He thinks "the Durhams or short-horns have fallen into disrepute as milkers, by falling into the hands of fancy breeders who keep them for show and not for milk, but he does not know of any breed of cattle, which, for the food consumed, will produce as much milk, as much butter, and as much beef, as the "short-horns." He had not been successful with Ayrshires; but they will graze well even in rough country, and are in much favor. He said farmers must select their stock according to pastures and purposes."

Professor Leander Wetherell, editor of the Boston Cultivator, and a practical dairyman and stock-raiser, as well as a discriminating observer in all departments of agriculture says: "First, a dairy-farm, and then the cows to stock it; and well does the young dairymen inquire: What breed will yield best returns in milk, butter, and cheese? The answer must depend upon what you propose to do with your milk. Among the breeds that rank highest in quantity, are short-horns and Holsteins, and their crosses, half-breeds, three-fourths or higher; if you want a smaller breed, the Ayrshires may be introduced with their crosses, and these breeds have been found to be good for cheese production, if that be your purpose; if butter, then use Jerseys, Guernsey, or Alderneys, is the ordinary advice. I have no objection to using short-horn crosses for butter, or for any other purpose for which a cow is kept on a milk-farm; but whatever the breed, get the best. Having decided on the breed of cows, consider every cow a machine to convert forage into milk. A ton of hay in excess of the amount necessary to keep up the animal heat and sustain vitality, gives two hundred pounds of cheese. A cow eating six tons of hay per annum, shall produce four hundred pounds of cheese per annum, worth sixty dollars; while a cow eating and digesting nine tons would produce 1,090 pounds of cheese, worth $163.50. But, says the farmer, it would be impossible to get nine tons of hay into a cow's stomach during the year; then breed up to it; which can be done by breeding from thorough-bred short-horns of the Duchess or Princess family, descended from Bates' beeeding, whose "First Duchess" calved in Northumberland, England, June 7, 1807, yielded milk for some months that made butter that sold for two guineas per week."

Mr. W. L. Rutherford, of St. Lawrence county, New York, Mr.

Digitized by Google

Cole, of Indiana, and other successful dairymen testify to the great benefits derived from introducing superior two-year-old male Jerseys to selected native dairy-herds. Mr. Cole has, after twenty years of careful attention to the dairy business, brought his entire native herd of cows, under the Jersey treatment, up to an average of three hundred pounds of butter for each cow per season. Mr. Harding, of Louisville, Kentucky, also a successful dairymen, has a high opinion of, and great confidence in, native cows for great results in dairying.

The Massachusetts Agricultural Society, after many years of experiments, has not been able to decide the point of excellence between the competing breeds of cattle. The Hampshire, (Mass.,) agricultural association has declared, after numerous tests, in favor of the Devons. But all agree on one point, viz., the policy of generous feeding and careful treatment. If the climate is not what is desired, make one that will keep the cows from being once chilled; as the expenditure or waste of food in counteracting frost destroys the profits, and the cold impairs the milking capacity of the cows. Any animal carefully housed is half fed. A cow that has been poorly wintered will scarcely be fit for business before mid-summer. Equal temperature, pure atmosphere, good ventilation, abundant food, and clear water are essential in pushing a dairy up to a profitable standard at which a sound dairyman aims.

It would, I respectfully submit, be desirable to avoid introducing and multiplying in this country a breed of cattle which would not be of general utility or serviceable to the average American farmer, who wants stock that will enable him to carry on his farming operations advantageously and comfortably, especially as there is no lack of land or food for man and beast, and therefore, inasmuch as it is a well established or demonstrated fact that the short-horns and Devons generally thrive well and have achieved desirable results, our preferences should be confined to a choice between those two breeds, in efforts to improve native cattle for the general purposes of the farm, as no one can go wrong if he takes either. Their vigor or vitality commend them as sound breeding-stock; and in all cases they have toned up the grade of our native cattle. For the yoke only, the Herefords, as seen in England, seem to be entitled to preference, in consequence of their great size and enormous strength; and in our pineries, where large oxen are in demand, they would be

Digitized by Google

invaluable; although for ordinary farm business and on the road, the Devons are probably more useful, because of greater quickness of pace, and also on account of being easily mated, as a consequence of more thorough breeding. The short-horns being of the lymphatic style, are not so quick or muscular as the Devons or Herefords; but, when required for meat, will respond to any reasonable demand. As to dairy or milking qualities "honors are divided" between the short-horns and Devons. After centuries of competition and rivalry between the Yorkshire and Devonshire breeders, the laurels seem to be going into the hands of the breeders of the royal family of short-horns called Duchess or Princess, which is merely a Durham with a mansard. It is of very little consequence, however, what breed of cattle a farmer prefers or keeps, unless he will treat his stock according to the most approved system adopted by judicious, careful, and presistent breeders. If a stingy policy is to be pursued, get goats instead of cows, and exchange your horses for Shetland ponies or dwarfed donkeys; but if a nobler and better policy is contemplated, aim for excellence, developed in all its length, breadth, and strength.

### GRASS-CULTURE FOR DAIRY-COWS.

The most important and valuable paper that has been contributed for many years to agricultural literature in America was last year presented to the consideration of a convention of distinguished American dairymen, by Mr. A. W. Cheever, of the New England Farmer, who related his successful experience for twenty years in the culture of grass for dairy-cows. A copy of his valuable paper on that topic will be placed in the hands of your Secretary, and should be published for the benefit of western farmers.

Mr. Cheever objects to feeding dairy-cows upon dead corn-stalks, straw or ripened grain, and over-ripe hay, which is little better than straw, when it is just as easy and more profitable to supply them with the best fodder our land can be made to produce. His first aim, after getting good butter-cows and suitable conveniences, is to secure the largest possible amount of the best fodder. Experiments repeated time and again have convinced him that the crops of grass on his Massachusetts farm are almost invariably worth more for fodder the year they are sowed than the grain and straw together would be worth, if grain instead of grass was made the leading

Digitized by Google

crop. So long as a ton of good, fine, sweet English hay is worth more than a ton of any kind of straw, so long will it be advisable to raise grass alone instead of mixing it with any of the small grains.

He does not believe in sowing grass with grain, as many do, for the protection of the former. He invariably cuts two good crops of grass each season, after seeding with grain alone. He follows the indications or examples of nature as to the time of sowing grass-seed, which is August. Early autumn is the natural seed-time for grasses and all biennials and plants that take time to get root. He keeps his land rich and mellow, and cultivates it as carefully as he would for grain-crops. Grass grown in the fall early enough to get well established, will produce a full crop the succeeding year. He sometimes gets three crops of grass in one season. He regards timothy one of the poorest kinds of grass for spring-seeding, and orchard-grass one of the best; as the former, like the onion, is bulbous-rooted, and cannot be cut with safety until it has reached some degree of maturity, and if cut as close as grass is usually cut, the chances are that a large portion of the timothy plants will never revive, simply because the bulbs have not enough vitality stored up to retain life when divested of their leaves and exposed to the burning suns of July, while orchard grass, although a little tender during the first winter, can be cut as soon as it begins to lean or fall, and may be cut every six weeks through the first summer, yielding great crops of excellent hay for cows and becoming strong for entering the next winter. When once established it may be cut two or three times a year, producing large crops of the best fodder. He pronounces it the most valuable grass grown in the country.

He sows liberally, casting two bushels of orchard-grass seed, with one bushel of June-grass seed, and as much clover as with other grasses, on each acre; and this generous seeding, leaves no chance for weeds to smother the grass. His chief difficulty is to cut grass early enough to prevent the stalks from becoming hard and wiry on reaching maturity. If the land is kept in a high state of fertility and productiveness, the cost of plowing, harrowing, seeding, etc., is saved. His plan is—"top-dress only good grass; re-seed old fields that are run out." I would most respectfully and earnestly commend Mr. Cheever's statements to the attention of western farmers.

Digitized by Google

BRITISH AND FRENCH AGRICULTURE.

British agriculture is almost perfection. Taking the farmers of Great Britain as our instructors, we may derive some valuable hints from their experience. Of the fifty millions of acres under cultivation in the United Kingdom of Great Britain, less than twelve millions of acres are devoted to "white-crops" or cereals, while over twenty-six millions of acres are kept in permanent pasturage, six millions of acres under clover and rotation-grasses, and six millions of acres devoted to turnips and other vegetables. England, Wales, Scotland, and Ireland, have about two and three-fourths millions of horses, ten millions of cattle, and over thirty millions of sheep. Repetition of white or grain crops is not permitted. Instead of the old process of restoring or resting land by keeping it fallow every fourth year, which was equivalent to the permanent withdrawal of one quarter of the tillable land from cultivation; the turnip-crop, with its broad leaves that shield the soil from the rays of the sun, and with its nutritious roots that are fed, before ripening, to cattle and sheep, is resorted to as the most effectual method of benefiting both land and stock, as biennial-plants derive their chief nourishment from the air, and do not exhaust the soil, if used before they ripen.

Forty-two acres in every one hundred acres in England, and sixty-four in every one hundred acres in Ireland are pasture. England imports only five per per cent. of meats consumed. The capacity of land when kept up to its utmost productiveness in densely populated countries of Europe is demonstrated in the ability of many tillers of English soil, besides paying heavy rents, to support a large family on the products of six acres of land; and in Germany, two acres of land have yielded a similar amount of subsistence; while in France, where the long and narrow ribbon-like farms are cultivated almost as carefully as gardens, the capacity of land has reached results that would tax western credulity. The French farmers seem to enjoy great benefits from the culture of the sugar-beet; and one farm that is owned by Monsieur De Candaine, located on the Touraine, valued at two millions of francs, or about four hundred thousand dollars, with sugar, linen, and woolen factories thereon, sends to market annually one thousand head of fat cattle. The annual income of this farm is five hundred thousand francs, or about one



Digitized by Google

hundred thousand dollars. Doubtless, upon investigation, it would be found that beets and oil-cake contributed largely to the production of the marketable cattle, while the cattle and sheep contributed to the production of the materials used in the factories; and that grass instead of grain was the commanding crop of that valuable farm. The importance and value of the beet crop in Europe may be inferred from the fact that the annual production of beet-root sugar reaches a quarter of a million of tons in France, nearly two hundred thousand tons in Germany, over one hundred thousand tons in Austria, a similar quantity in Russia, thirty-five thousand tons in Belgium, fifteen thousand tons in Poland and Sweden, and ten thousand tons in Holland. Estimating this sugar, which compares favorably with the best quality of white loaf-sugar, according to specimens sent to me by a Wisconsin gentleman who gave some attention to it during a visit to France, at the low price of ten cents per pound, we find the value of this product alone, in the countries above mentioned, aggregating six hundred and eighty-five thousand tons, gross weight, is one hundred and forty-three millions, four hundred and forty thousand dollars annually.

### NEED OF MORE PRACTICAL INFORMATION.

Whether the discussions, addresses, lectures, editorials and reports of agricultural teachers have been too technical and lofty for common comprehension, or not; and whether the large expenditures of time and money in connection with the numerous national, State, and county agricultural exhibitions, (which are too often miserable imitations of a good horse-race, with enough pumpkins and squashes to take off the curse so as to increase receipts,) have been successful in imparting needed instruction to the masses, as to the best modes of making the soil productive or not; and whether proper and well-devised efforts have been made to direct the labor and capital of farmers into the most remunerative branches of agriculture or not; we are forced to admit, that the improvements in American agriculture have not kept pace with the mechanical skill and ingenuity, which have filled the country with labor-saving machinery, and stimulated a pernicious system of gathering or raising (instead of cultivating) bulky grain-crops, whose value fluctu-

Digitized by Google

ates with the rise and fall of capricious and distant markets; and consists largely, or is chiefly contingent upon transportation.

Deducting from the one hundred and twenty-five thousand dollars expended by the State, district, and county agricultural associations in annual exhibitions in Wisconsin, the premiums on machinery and manufactures from points outside of the county in which they are exhibited; and also the purses given to miserable, pedigreeless, and itinerant nine-spot sporting-nags, that trot just fast enough to beat their owners by diverting attention and time which might be more advantageously and usefully devoted to breeding valuable roadsters, carriage- and draft-horses, cattle or sheep; and also deducting the expenses incurred in parade, and in procuring highfalutin orators who do not know a monkey-wrench from a hydraulic ram, or rye from barley except in fluid forms, to what slender proportions do we find the actual and direct aid given to ascertaining and disseminating correct and definite information of a practical nature in regard to the best means of maintaining a high degree of productiveness in the soil, or rich results in its products?

### SKILLED OR EDUCATED INDUSTRY.

First and foremost among the indispensable means of maintaining sound principles in regard to agriculture, which forms the foundation of commerce, is the general diffusion of knowledge among the people, not only in reference to public, governmental, and international affairs, but also in regard to the nature of ingredients of the soils, the most effectual methods of arresting its decay and increasing its productiveness, the most economical system of effecting exchanges of the natural product of the earth and of human skill and toil. These points involve acquaintance with the realms of nature, science, art, and statesmanship; for the farmer's investigations into these affairs, which affect his personal welfare, must necessarily enlarge his vision of surrounding objects of interest and beauty, just as one's ascent to commanding altitude in the highlands will expand his views of scenery whose enchantments are unappreciated by the collier or lowlander.

The observance of this educational feature of agriculture and industry has given to the world some of the most able, pure. and useful men who were ever called into public service and to stations of honor, trust, and usefulness, from the farms and work-shops of this

Digitized by Google

and other countries, and the sooner we get rid of the idea that agricultural or industrial employments, when wisely and properly pursued, are to be exclusively the portion of the degraded and ignorant, who are content to go and come through life's drudgery under the light and guidance of an almanac, which directs them when to lie down and when to rise, and designates the appointed months for seed-time and harvest, the better will it be to mankind; as the false notion is deplorably prevalent that the avenues to prosperity, happiness, and honor are through any and all other channels or fields of action and enterprise except that one, which, above all others, is best calculated to bring man into full communion with the glories and realities of nature, and best adapted to the creation and maintenance of manly independence and virtue, and that soundness of mind, heart, and body, which are impaired by familiarity with, and dependence upon, the artificial substitutes for pure atmosphere and well-directed or intelligent industry.

As to the best means of acquiring a sound agricultural education, or education upon sound agriculture, or agriculture with education, or skilled labor applied to agriculture, many opinions have been expressed, based on theoretical suggestions and practical results, among which are agricultural colleges, which are as likely to increase the wear and tear in the hindermost part of students' pantaloons as to augment the numbers of educated farmers, unless accompanied by facilities for applying the scientific knowledge acquired in those institutions, by practice or experiment, to the real and actual operations of agriculture.

In England, where, with high rents for lands that are kept in the highest attainable degree of productiveness, as a matter of interest on the part of the landlord, and of necessity on the part of the tenant or farmer, it is one of the valuable perquisites or sources of profit of a successful and skillful agriculturist to educate young men, whose fathers own valuable landed estates, in the art of farm-management, in which stock-raising is justly regarded as a prominent feature, not only on account of its relative or comparative profitableness, but as supplying the means of enriching the soil for roots and grain-culture.

An intensely practical wag, with little regard for scientific information or investigations and book-treatment, in reference to the acquisitions of knowledge required for agricultural pursuits, has

Digitized by Google

said the best way for a young man to learn about agriculture is to bind himself out in a three-years' apprenticeship with some good farmer, and, at the expiration of his engagement marry his daughter.

This may, and doubtless will settle his hash; but unless he is a royal good fellow, he ought not to be invested with that high degree; as the price of a farmer's marriageable daughter, reared under proper influences, should be "far above rubies; for she will do her husband good and not evil all the days of her life, she seeketh wool and flax; she girdeth her loins with strength, and strengtheneth her arms; she perceiveth that her merchandise is good; she layeth her hands to the spindle and distaff; she reacheth forth to the poor and needy; she is not afraid of the snow, for all her household are clothed with scarlet, strength and honor are her clothing; her mouth uttereth wisdom; her tongue is the law of kindness; she looketh well to the ways of her household, and eateth not the bread of idleness—her children arise up and call her blessed; her husband also, and he praiseth her." Under such auspices a man may become a good farmer; for he will learn from his sensible wife that progress and godliness are profitable, with less technicality, but in a more practical form, than if he had hoisted his heels higher than his head, in a purposeless and indolent sojourn of four years in one of our Yankee-Doodle subsidized colleges, which has assumed an agricultural title to secure a land-grant endowment that practically contributes little or nothing to agriculture.

We need in this country more of those facilities for the acquisition of a thorough agricultural education which exist in France; where, in nearly all the primary schools, the elements of agriculture and horticulture are taught; while in many of the larger towns, such as Amiens, Bordeaux, Nantes, Rouen, Toulouse, etc., public courses of agricultural information are conducted at the joint expense of town and State, by learned professors; and government schools of agriculture are maintained, with choice breeding-studs, sheep, dairy, and stock farms, and imperial establishments of great completeness and perfect equipment for the propagation of accurate and practical knowledge upon the several branches of, and acquaintance with a technical and scientific education appertaining to agriculture. There are over fifty farm-schools in operation in different parts of France. Above these are three great veterinary

Digitized by Google

schools—at Alfort, Lyons, and Toulouse—where the diseases of cattle, sheep, horses, etc., are as carefully studied as human diseases are investigated at the best medical colleges. These imperial schools of agriculture are placed under the care and control of the minister of commerce and agriculture, who is also authorized to give the aid of the government in the encouragement of local enterprises for the promotion of agriculture. Individual enterprise in this department has also had success.

### CONSERVATISM AND PROSPERITY

go together in agriculture as in other departments of the divine and physical economy, and in governmental, commercial, and personal operations or systems. In using the term "conservatism," we mean a wise and diligent preservation or conservation of the elements or forces placed at man's disposal by a beneficent Creator. Looking directly and squarely to the case of the agricultural population of the west, in respect to existing and future conditions or facilities for the development of human happiness and public prosperity; and viewing this munificent endowment of fertility of soil, ample forests, irrigating and navigable waters, and the immense capacities of this highly-favored country, as seen in the resources of our own good State of Wisconsin, with its frontage on waters that flow to the ocean by northern and southern channels, either as a patrimony or property subject to the absolute control or disposal of the present generation of its occupants and owners; or as a trust to be transmitted and handed down, with its accumulations or encumbrances, to succeeding generations; let us duly regard the mandates of sound policy as to its management, both in respect to present advantages and future needs, by working in harmony with the clearly indicated plan of nature, which is too often thwarted by man's reckless and terrible destructiveness.

### ADMONITIONS OF HISTORY.

We must recognize the palpable fact, verified, not only by observation and experience, but by history, that no race or nation, or generation of men can make war against the order of nature, and derange the combinations of inorganic matter and organic life, and disregard the physical conditions of the earth, and destroy the equilibrium in, or suspend the functions of the natural forces, and carry

Digitized by Google

on indiscriminate warfare upon all forms of animal and vegetable existence within reach, and defeat the beneficent provisions of the Creator, by diminishing the resources of individuals, communities, and nations for the development of human happiness and public wealth, without, as the result of these destructive changes, inviting, invoking, and eliciting natural, legitimate, and merited penalties in sterility of soil, or that physical degradation, decay, and decrepitude, which we find in millions of square miles in the Old World, where a terrible blight has smitten what were once the fairest and most fertile provinces of Imperial Rome, including Greece, Alpine Europe, Northern Africa, Asia Minor, and nearly the entire basin of the Mediterranean—countries, which, for many centuries, from Egyptian times down during Grecian and Persian ascendency, Roman supremacy, Byzantine glory, and early Ottoman or Turkish magnificence, were fertile and populous, maintaining dense populations in luxury, supplying abundant sustenance for vast armies, without commissariats or sutlers, moving to and fro through lands that are now unproductive, desolate, and almost worthless; and transformed from a goodly heritage into a realm of sterility, desolation, and poverty.

Mr. DWIGHT: I thought as I had been down in the State of New York, to one of the best dairy-regions in the State, this winter, I might say something which would be of interest. I was in the county of Oneida for six weeks, and nearly all the stock kept in that portion of the State are cows. I didn't see but one or two small flocks of sheep, and but very few hogs. They don't raise fast horses, and they don't confine themselves exclusively to dairying. They raise a great many hops. One gentleman sold $27,000 worth off from sixty acres. Neither do they pasture their land as close as we do. I walked over many fields, and you would sink as far as your ankle in the grass. They would manure the land until it was in such a state of fertility that it would produce enormous crops of grass. This is on a branch of the Mohawk. They raise great crops of potatoes, and great crops of fruit, so that their riches don't proceed from the dairy alone, but principally from the grass and manure. I believe the more grass the more manure you have, and the more manure the more grass. They feed well. One gen-

Digitized by Google

tleman assured me that the best cows he had selected for milk, and then he raised a sort of breed from them, crossing the Durham, and the Ayrshire, and that they were, for dairy-cows, far better than either of those breeds for butter and cheese. A gentleman in the village of Clinton was offered $225 an acre for two hundred acres. He had twenty acres of orchard which he assured me would pay the interest on $2,500 per acre. Now, with our cheap lands, we can raise four bushels of corn to their one, although they raise more than we do to the acre, but they cultivate a great deal more; they don't throw their manure out of their barn. They have plenty of water; they have land they have pastured for sixty or seventy years. They do this by keeping the land in grass and making an immense amount of manure. They are also all thrifty, economical people. They have turkeys to sell, and also some fat cattle to turn out. They are all in good circumstances, although the iron interest in the town was depressed. I observed one fact, that most all of those farmers that lived there when I was a boy, had sold out and gone to the village. Their young men were going around town telling smutty stories; the daughters were spending their time thrumming on a six or seven hundred dollar piano. Nearly all the men I knew in my boyhood had moved into the village; some had gone into speculation, some had got rich, and some had lost all of their money. The men from England who came there poor owned the lands. By raising hops, and keeping cattle, and raising grass, they have kept up the fertility of the land. Our lands are deteriorating; land that produced thirty bushels to the acre in 1860, now will not produce ten.

Mr. PEFFER: I was very much interested in the paper read just now, and I find it mentioned that where there are the most people, and the most productive soils, it is not alone enriched by the grass. These lands mentioned must, from necessity, support a large population. The sugar-beet cultivation came into existence from that cause. They have to enrich their soils to such an extent that they can support that population. I came from the old country myself when I was a boy. At those times, in most of the agricultural portions of the country, the manner of enriching the soil was by raising clover and grass, and by irrigation. From that they went to raising plants that produced oils; they made oil-cake for fattening their stock, and enriched the ground in that way. They also cov-

Digitized by Google

ered the land with marl. Peat was also used on clayey soils. There was a good deal of under-draining done, which was counted first as an advantage, and afterwards abandoned. There are no large farms there. Farming was carried on with such plants as I have mentioned. The first factories that were established were failures, but there were prophets that said it must be done and can be done, and finally it was successful.

Mr. OBLEDGE: I was not here when the gentleman's paper was read, but I heard one good idea advanced. I think the gentleman struck a good point when he said our universities were not giving us fair returns for the money they cost us. I think it is true. I don't think they have done us any good at all. I don't think they are going to do us any good until they are radically changed. With regard to the east improving so fast, we must consider that we are growing more than we can consume, and we have to get an outlet for it. If we send away a bushel of wheat, we send away a part of our land, and the east is draining everything from us. All of the land, and all of the money, mostly everything is going east; but we cannot help ourselves that I know of. It is one of those things that comes from the natural circumstances of the case. People talk about England's making money; the whole world is shoving its produce into England, and making them richer and wealthier. I don't know how you are going to help it, except by an increase of population. Our farmers here are farming as becomes them in the situation they are in. The question is, whether scientific farming is any good to us. We want but little science in farming. We have the soil, and we want the labor to put to it. When we get as thickly populated as England, then we will need science to help us to produce from one acre of land three or four times as much as it does now. We have more land to the acre out here than in any other part of the world. Most any man that goes into farming knows very well the farmers of the west never have made a penny out of labor, except to just pay their way, and a good many of them haven't done that. Although there are many rich men among us, their property is the product of the increase in the population, rather than any good judgment in farming. In Kenosha, one of the most valuable counties in the State—I think it is the richest, comparatively speaking, taking the whole body of farmers—in Kenosha county, to-day, they are not worth one penny more than

Digitized by Google

what the increase of the value of the land makes them worth. I don't know how you are going to obviate this until you increase the population and have the consumption at home. I think were our young men taught to honor farming as we honor it ourselves, who preach up that farming has something good and independent in it, that we should find our farmers would remain there instead of going off into the towns and villages. It is our fault that our boys don't stay at home. It is our fault that our daughters are thrumming on pianos. We are responsible for our children, not our children for us, and they are what we have made them.

Mr. ANDERSON: In listening to this able paper I was very much interested, but I felt very sorry that our hall was not as well filled to-day as it was yesterday, because I do think that was the ablest paper I have ever listened to, one in which we, the farmers of Wisconsin, are more interested in than in anything else. It certainly does show us that we must keep up the fertility of the soil. That is something I have been preaching year after year. I don't claim any mystery for farming; and if I have not made any money for the last five or six years, the cause was the drought or the insects, I do claim that the fertility of my soil has increased from year to year, and my farm will, in any ordinary season, produce double what it did fifteen years ago. I have done it by feeding stock. I have no grain to sell. I buy largely of coarse grain and hay, although one year I raised over two hundred and seventy-five large loads of clover-hay, I bought hay that same season. In this country, the only thing that I know of that we can do to keep up the fertility of our soil, is to depend upon the barn-yard manure; that must be made by feeding grain to live-stock, to sheep and cattle, horses and hogs. This article of grass we are very much interested in. I received from Germantown, in the summer, a package of orchard-grass, but I was not as successful in raising from that package as I wished. I intend to try the orchard-grass again. I am advised that we must be careful where we get our seed; that there is danger of this twitch-grass, which I am not acquainted with, among the orchard-grass. I am going to sow about thirty acres next year of alsike clover. The land is rich and well adapted to it. About sixteen years ago I sent east to get some of that grass. It is certainly a good grass for pasture. I cannot compete with the cheap lands of northern Minnesota in raising wheat. I can-

Digitized by Google

not compete with Texas in raising cattle. We must raise something that they don't produce there. If we raise cattle we must raise the very best quality. We must not raise three-or-four-cents-a-pound beef we must raise number one beef. I claim that sheep, take them one year with another, pay me better than any other stock. I sold three hundred and eighty sheep this week; they brought me about $2,100. That was not a very high price for the sheep, at the same time they have paid me well for all the grain they have eaten. They consumed, and converted all my rough fodder into good manure, and I feel satisfied that if my greenback-pile is not very large, that my manure-pile is a very large one, and of a good quality.

Mr. GRAVES: I would say one word respecting alsike clover. There was a man in our neighborhood some years ago, brought in quite a quantity of it; it proved a failure; it fell down and became perfectly matted; it is most excellent grass; it is fine for pasturing; for hay it is very poor. I would say, further, that I have been much in favor, and have adopted the plan of raising grass and stock. I have not raised any wheat for ten years to amount to anything; I saw that it didn't pay; I turned my attention more to hay, grass, and stock, especially sheep. I think that sheep pay the best of any stock that we have, taking into consideration the amount of labor. I think farmers ought to turn their attention to raising stock. If they would raise sheep and cattle they would be much better off in the end.

Mr. ADAMS: I didn't hear the paper which was read in your hearing, but I heard some of the remarks that were made. It seems to me that Mr. Orledge, in relation to the situation of farmers in this western country, attributed their condition to the wrong cause. I believe there is some over-production, at the same time that is not what causes the financial distress that prevails among the farming community. The mistake is simply this, they have adopted what I call the American system of doing business. They have gone deeply into debt, carrying a burden which will require a life-time to shake off. Another point relative to retaining our sons at home. My idea is, that every person should follow his own inclinations in selecting a pursuit. We all know that our children, as they reach maturity, scatter according to their inclinations. I would not have it otherwise. The farmers will never lack num-

Digitized by Google

bers, and if we would induce them to follow the calling which we follow, we must labor to show some pecuniary results from the business, and in order to do this, I believe in scientific farming. I believe we should avail ourselves of every help within our reach to accomplish this object.

Mr. SEYMOUR: After making so full a statement, perhaps I ought not to occupy the time of the convention, but I would meet the objection raised by my friend at my left, Mr. Graves. Mr. Cheever speaks of the weight of orchard-grass, and its lodging. It should be cut early, after that you have it under command and if necessary, it can be cut three times in the season. I would say further in regard to the point of my friend on the right, Mr. Peffer. He speaks of the European plan of agriculture. He speaks of the sugar-beet. One of the chief benefits arising from these roots, the beet and the turnip, is the broad leaf that shades the ground from the rays of the sun, and also, derives a great deal of its nutriment from the atmosphere instead of the soil, and Mr. Webster, in his report to the Massachusetts legislature, after his return from Europe, in 1839, stated that the turnip had revolutionized the agriculture of England, and that one of the chief benefits was, that it was a product which adds a large amount of forage or food, and which makes it valuable for us in carrying on the farming operations with stock, and without impairing the soil, and instead of pursuing the old principle every four years of allowing the land to become fallow, after three years cropping, which was equivalent to the withdrawal of one-fourth of the tillage of the land of England, they fell into the habit of restoring this land with the turnip, and the result has been instead of a rotation of crops in England, for the improvement of their land, they have fallen back upon the turnip. Mr. Webster says the turnip-fields were from ten to thirty acres in size, yet he very often saw a turnip-field of one hundred acres, and three and five hundred acres. In this country we can derive benefit from the same source. I think the objection that is raised about grass, is met by Mr. Cheever in his valuable paper. He says it should be cut early. He would rather cut his orchard-grass, with a certainty that a three-days' storm would overtake him before he could cure and house it, rather than let it run three days, and become dry and wiry, and hard. As to the productiveness of farming, I have watched this thing along pretty well, and hear farmers

Digitized by Google

grumble that they are not getting along quite so fast as others. We measure ourselves by others. We see men getting rich. One man is getting a fortune by literary tact, another by railroad stealing. I have noticed one thing, that a good many of those boys who go away from home because they don't want the drudgery of a farm, very often come home on a little visit, and ask their father to endorse a note for them.

Secretary FIELD: I desire to say a word, more in answer to what Mr. Adams stated than otherwise, not that I desire to say anything further upon this financial question, as that has been discussed at great length, and very ably by some, but I desire to say to Mr. Adams and to other gentlemen of this convention, that I believe in people being in debt, provided they are not paying such rates of interest as to take from them all their profits except a bare living. If my friend Mr. Seymour has $100,000 in cash, he does not care about investing it in the various industries of the world. He can do better. He can loan to Mr. Adams ten thousand, to my friend, there, ten thousand, to me ten thousand, and to others throughout this State. He is not compelled to loan that money, but if he does loan it, it shall be at a price we can afford to pay. Then it would be a benefit to all. You understand farming, I understand manufacturing, another man understands another branch of industry, and the world is largely benefited by our being in debt, and by his loaning that money, provided we get it at a price we can afford to pay; for wealth cannot be produced in this world without the joint partnership of capital and labor. There must be both; they must be combined, and I claim that labor should have nearly all the profit; and in a word I will tell you why. Labor takes all the responsibility, takes all the chances, or very nearly all. For, if Mr. Seymour loans me $10,000, and I give him proper security, and he is not going to let me have it unless I do, he takes no chances whatever. If I agree to give him three per cent. he is going to get his money; he is as sure of that as he lives, while I take all the chances of water and fire, chinch-bug and grass hoppers, and all the evils incident to any productive enterprise; he takes none of them on his shoulders, hence I say if I can produce with my labor and capital combined, three or four per cent. only, above a bare subsistence, I am entitled to nearly every cent of it. He is entitled to something, but in my judgment he is not entitled to more than two or

Digitized by Google

three per cent., and could not earn more if he invested his capital in business and employed others to perform the labor.

---

## SELF-CULTURE.

BY H. C. SKAVLEM, NEWARK.

That the farmers, as a class, are greatly in need of education is apparent to all. We have essays, addresses, and lectures on the "education of farmers," without number. Professors and teachers of our higher institutions of learning generally, tell us how to become "educated farmers." We must understand chemistry, that we may have a knowledge of the soil we cultivate; botany and zoology are indispensible, while geology, mental and moral philosophy, etc., are necessities. In other words, we must have a good collegiate education, with a thorough knowledge of the natural sciences. This, combined, makes you an "educated farmer." And in order to make it the more easy, they tell us that mental culture and physical labor can not go hand in hand. These ideal farmers may look well enough on paper, but I do believe that such statements oftener discourage than encourage the average farmer in his endeavors to increase his scanty store of useful knowledge. What proportion of the real farmers in your neighborhood are what our professors would term "educated farmers?" How many of your prospective farmers will be thus educated? Do your college-graduates generally return to the farm and there commence farming, with no other capital than their college-diploma and soft muscles, if not soft brains?

Gentlemen, those who will take the places of our present generation of farmers are those who from boyhood stay on the old homestead, or who commence farming by their apprenticeship as "hired-help," and tenant-farmers, and who by industry and economy in time accumulate enough, it may be, to purchase the very farms on which, years before, they commenced their agricultural education as the "hired-man." This is the general history of the average farmer of to-day, and will be the history of those to come. We must look at things as they are—deal with facts rather than fancies, if

Digitized by Google

we expect to either benefit ourselves or the community in which we live.

How are we to advance the general intelligence of the average farmer, is a question of more importance than either "cheap transportation," taxes, tariff, or finance, because, under our government, on the intelligence of the masses depends the permanent and correct solution of these and kindred questions. Everett says that, "education is a better safeguard of liberty than a standing army." Bacon conveys the same idea in the well-known maxim, "knowledge is power." David says, "a wise man is strong; yea, a man of knowledge increaseth strength," an idea that needs must occur to the observing men of all ages. That we may perform the various duties of life, we are endowed with a mind, a will, and a capacity susceptible of cultivation. Whether a man be but the graduate of our common schools or possess the wisdom of a graduate of Yale or Harvard, unless he exerts his will-power, energy, and resolution, he will ever remain a cipher in the world. Our common schools are the preparatory departments of the farmers' college. Here, any and every one may gain possession of what Huxly terms the "tools of knowledge"—reading, writing, and elementary mathematics. With these, you have the key whereby you can gain access to the studio of a Newton or Franklin; you may spend a winter's evening with Emerson or Carlyle, or you can ponder the deep and unfathomable "enigmas of life" with a Grey. At your leisure you can attend the lectures of Darwin, Huxly, Tyndall, or Proctor. You can listen to the discourse of a Luther or Wesley, Edwards, Knox, or Channing; or you can follow Draper, in his "Intellectual Developments of Europe," and glance at his "Conflict between Science and Religion." You can study human nature with a Shakspeare or a Scott. You can gratify your imagination with the works of a Milton, or even Hugh Miller's description of that time when "Curthur's craggy bulk, that dweller of the air abrupt and lone," was first ushered into the world. Hitchcock and Dana will give you the language of the rocks, and the history of the everlasting hills. But why enumerate the histories of the past? The works of the present and the speculations regarding the future are before you, ready to instruct or amuse; but upon one condition—you must study, must work.

Do not understand me here as considering colleges and institu-

Digitized by Google

tions of learning unnecessary. Far from it. The more colleges, the more schools, the better. To the thinking and inquiring mind these are, indeed, great helps. But bear in mind that all the schools in christendom will not educate you unless you apply your own mind to the subject, unless you yourself work. On the other hand, if you are willing to work, to burnish up your mental machinery for action, while the moral sentiments are allowed to guide and pilot you through the sea of passions, I ask, when and where will you not find teachers? Why, the value of a likely pig will call to your side the works of the best statesmen, philosophers, poets, and divines of this or any preceding age, while the value of a calf will annihilate time and distance; it will place before you Rome, with its unbounded wealth and unequaled misery; instantly you are with Stanley, exploring the source of the Nile, or, it may be, with Anderson, studying the "sagas" (traditions) of old Norway.

We may not have the galvanic battery, nor any of the apparatus of the college lecture-room, but for practical experiments concerning our chosen vocation, we have apparatus enough for study. The sun is our galvanic battery. We have the various kinds of soil in which to sow our seed; we have rain and wind, snow and frost; the various changes of the seasons; in fact we have all nature at our side, ready to assist us at every step as we become familiar with her laws and follow her directions.

But where is the time for all this study—this training of the mind? "Take care of the minutes and the hours will take care of themselves." How many of our average farmers take care of their minutes or even days? How often could they not truly say, with the Roman emperor, "I have lost a day." It is not the lack of time for study, but the want of study when they have the time that make the agricultural classes the slaves of the scheming politicians party lash, and the "serfs of monied monopolies"—in reality, the serfs of their own ignorance. The colleges are for the privileged few, and will not at least in the near future extend to the "toiling millions." The larger portion of the farming community cannot enjoy the benefits of a college-education. They must either remain the simple "hewers of wood and drawers of water," and voting cattle, or they must

Digitized by Google

EDUCATE THEMSELVES.

Self-culture is the one thing needful.

Self-culture is the knife that must cut the gordian-knot that binds them slaves to selfish capital and a host of political demagogues.

Self-culture will enable them to govern the railroad kings and solve the questions of cheap transportation. It will properly care for our "rag-baby." Yes, and an intelligent, moral, and self-thinking people will then "discover some way in which it will be possible (not) to educate," but to eradicate those who now live and fatten upon the laboring farmer and sneeringly term these conventions "hay-seed humbugs," and other pet expressions so freely indulged in by the professional blackguardism of some of the daily press, who term themselves the leaders of public opinion, but who really are but the tools of corruptionists and the ready servants of money-brokers.

How often we hear men whining about "what might have been," were they only educated. Such men remind me of the man who sat down on a stump in the middle of a forty-acre lot and awaited the coming of the cows to be milked. He waited, but got no milk. These men may whine and whine, but will make no progress. They lack the mainspring of progress—energy and resolution. Their mental powers lie dormant and know not their strength.

This is especially the case with our average farmers. Their mental powers become weak and torpid for want of exercise. They have so long been told that physical labor and mental exercise can not harmonize that they believe it to be so. They believe their inactive mentality to be the result of physical labor, while the truth is, at least with a large majority, it is simply the lack of mental exercise. "Keep the body in health, and the brain will take care of itself; work it all you can," yes, the more you work it the stronger it becomes. What is education? Various may be the answers, but to me practical education is simply a knowledge concerning ourselves and our relation to the world in which we are destined to live and act. The training to habits of action suitable to that distinction. No college-walls will give you this, and no professor can create a single idea for you, nor fill an empty "pate" with the thoughts of a Milton or Webster. You must use the



Digitized by Google

powers you have—work with the tools you possess to the best advantage—this is energy, and whatever you undertake to accomplish *stick to it.*

I care not what the capacity may be, without application it is of little value. Mo matter what your opportunities may be, whether you are swinging the ax or following the plow, or amongst the privileged class who scientifically exhaust their surplus vitality by kicking foot-balls or gymnastic exercise. Unless you exercise your mental faculties, unless you investigate, reason, compare, and analyze, unless you check and govern your passions by your intellect, according to the dictates of the moral sentiments, you will make but sorry progress in true education.

On every hand we see the agricultural classes awakening to a just sense of their situation, for,

> "I doubt not, through the ages one increasing purpose runs,
> And the thoughts of men are widened with the process of the suns."

For the past few years we have heard and said a great deal about the farmers being crushed, misused, and abused by all sorts of rings and monopolies, and a great many rushed to the grange and the club; the cry was, "organize for self-protection." We organized, and behold, defunct politicians and party-hacks discovered our situation, and how they did picture the situation of the poor farmer, and what is their remedy? "Come with *us* and we will guide you to the land that flows with milk and honey."

But the "thoughts of men are widened;" they are now taking the "sober second thought," and they discover that to a great extent "they give themselves the wounds they feel;" that it is simply a question of the "survival of the fittest," and if they wish to survive and progress, they must fit themselves for their situation. The club, the grange, the agricultural press, and these conventions, are more and more becoming what they should be—the great self-instructors of the farming community. Here mind comes in contact with mind; we become acquainted with the experiments, suggestions, and opinions of our brother farmers and we gain a knowledge concerning ourselves, as farmers. All this tends to stimulate thought, to create a desire to know more. Mind is awakened, and *progress* is the watchword. We begin to consider our duties and our privileges—our rights and our grievances—with this comes the necessity of a knowledge concerning those of other vocations;

Digitized by Google

a knowledge of the world in which we live and act. This again leads us to look about for means with which the better to perform our duties and protect our rights; the training to habits of action suitable to that destination.

Gentlemen, in every rural neighborhood, will be found those anxious and eager for mental culture. A little aid and encouragement may produce great results. Let us then well guard and support the ground-work of universal progress—our common free schools—encourage the "debating society," with not only good words, but an occasional "rag-baby." Support your public library. See that you have a well-arranged club, or grange in your community, and make the same interesting, and instructive by the discussion of live questions. Encourage the circulation of the agricultural press; prevail upon your friend to accompany you to these conventions, and while here freely express yourself on the questions under consideration. Be sure to give your opinion whether it agrees with Mr. A's, or Mr. B's version of the same, for by honest discussion and comparison of differences of opinion, we may fairly hope to arrive at just conclusions. And above all do not become discouraged if your labor and exertions do not meet with anticipated results. Lend your influence for the betterment of society. In the words of Carlyle, "It is a high, solemn, almost awful thought for every individual man, that his earthly influence, which has had a commencement, will never, throughout all ages, were he the very meanest of us, have an end." What is done, is done; is blended with the ever-living, ever-working universe, and will ever work there for good or for evil, openly or secretly, throughout all time. Let our influence then be such, that when our "days work is done," it will be said of us, a good man has departed, but his influence is with us and will work here for the good of mankind throughout all time, for "men may come and men may go, but it goes on forever." With this as our motto, we will educate ourselves, assist our neighbors in the same work and self-culture, will place each and every one of us in our proper sphere of action. Ignorance, intolerence, and bigotry must give way to intelligence, and the world will be improved by our having lived therein.

Mr. SEYMOUR: I have nothing to offer, only I wish to suggest to you in your forthcoming volume, or the next volume, that you will

Digitized by Google

present to the farmers' boys of Wisconsin, a few extracts from Washington Irving upon the topic of Rural Life in England, to show to what condition, what a high position the country gentleman attains, and what a high position he maintains in society where gentlemen are connected with agriculture. I have sketched it off and I would like the choicest sentiments printed in your volume, and it seems to me they will help to tone up this feeling among the young people, in regard to the honorableness and respectability of this occupation.

### COUNTRY GENTLEMEN.

Washington Irving has given to the world a glowing sketch of "Rural Life in England." He said:

"The English are strongly gifted with the rural feeling. They possess a quick sensibility to the beauties of nature, and a keen relish for the pleasures and employments of the country. This passion seems inherent in them. It is in the country that the Englishman gives scope to his natural feelings. He breaks loose gladly from the cold formalities of town, throws off his habits of shy reserve, and becomes joyous and free hearted. He manages to collect around him all the conveniences and elegancies of polite life, and to banish its restraints. His country-seat abounds with every requisite, either for studious retirement, tasteful gratification, or rural exercise. The taste of the English in the cultivation of land, and in what is called landscape-gardening, is unrivalled. They have studied nature intently, and discover an exquisite sense of her beautiful forms and harmonious combinations. Those charms, which in other countries she lavishes in wild solitudes, are in England assembled around the haunts of domestic life. They seem to have caught her coy and furtive glances, and spread them like witchery, about their rural abodes.

"The rudest habitation, the most unpromising and scanty portion of land, in the hands of an Englishman of taste, becomes a little paradise. The residence of people of fortune and refinement in the country has diffused a degree of taste and elegance in rural economy that descends to the lowest class. The very laborer, with his thatched cottage and narrow strip of ground, attends to their embellishment.

"The fondness for rural-life among the higher classes of the

Digitized by Google

English has had a great and salutary effect upon the national character. I do not know a finer race of men than the English gentlemen. Instead of the softness and effeminacy which characterize the men of rank in most countries, they exhibit a union of elegance and strength, a robustness of frame and freshness of complexion, which I am inclined to attribute to their living so much in the open air, and pursuing so eagerly the invigorating recreations of the country. These hardy exercises produce also a healthful tone of mind and spirits, and a manliness and simplicity of manners which even the follies and dissipations of the town cannot easily pervert, and can never destroy.

"In rural occupation there is nothing mean and debasing. It leads a man forth among scenes of natural grandeur and beauty; it leaves him to the workings of his own mind, operated upon by the purest and most elevating of external influences. Such a man may be simple and rough, but he cannot be vulgar.

"To this mingling of cultivated and rustic society may be attributed the rural feeling that runs through British literature; the frequent use of illustrations from rural life; those incomparable descriptions of nature that abound in the British poets, that have continued down from "The Flower and Leaf" of Chaucer, and have brought into our closets all the freshness and fragrance of the dewy landscape.

"The effect of this devotion of elegant minds to rural occupations has been wonderful on the face of the country.

"The great charm of English scenery is the moral feeling that seems to prevade it. It is associated in the mind with ideas of order, of quiet, of sober, well-established principles, of hoary usage and reverend custom. Everything seems to be the growth of ages of regular and peaceful existence.

"All the common features of English landscape evince a calm settled security, and hereditary transmission of home-bred virtues and local attachments, that speak deeply and touchingly for the moral character of the nation. It is this sweet-home feeling, this settled repose of affection in the domestic scene, that is, after all, the parent of steadiest virtues and purest enjoyments."

Mr. SKAVLEM: I admire the beauty in the description of the "country gentleman." One thing I wish is that these country gentlemen would go home and show these beauties to their neigh-

Digitized by Google

bors. There is another class of farmers who look upon a tree as representing so much hard labor to cut it down, and so many cords of wood, and a knotty, gnarly, stump is left. All the beauty they see in waving fields of grain, is so many hard days of labor. The beauty of grass, and trees that grow, and the beauties in the whole of nature is simply hard, hard work. These are the facts; these are the views of the majority of our farmers. What I wish is that you will help these men when you go home, by bringing to their minds the beauties of nature, awaken their minds, and when awakened they will help themselves.

Mr. ANDERSON: I was very much pleased with the last paper. The truth is, farmers think too little; they allow others to do their thinking for them. They read too little; they study too little. I think there is no class of laboring men who have more time to read than the farmers. If they will occupy the minutes they have to spare, the days and hours will take care of themselves. I hold that every farmer ought to take some agricultural paper, not one, but several of them; he ought also to take some of the leading journals of the day; he ought to have some good books on various subjects. The picture is not overdrawn that Mr. Skavlem paints. They don't read. I think one-half of the farmers in my section of country don't take a paper of any kind. You ask them to subscribe, and they say "we havn't time to read," "we can't afford it." I have heard intelligent men say, "if I try to read, I go to sleep." If he continues reading, that will work off, and he can enjoy it until ten and eleven o'clock at night, and be intellectually and physicially rested and benefited. We must impress upon the minds of our farmers, the importance of thinking more, not allow others to do their thinking—politicians and the newspaper editors do their thinking for them. Every man can very much improve his condition by reading more, and thinking more. One of the greatest evils of the present day, is that farmers don't improve themselves intellectually as much as they should do. I think they would be better farmers, better citizens, and better companions if they would do so.

Mr. MAIN: In traveling through the country I notice one thing which is a great injury to farmers, and that is destroying the shade-trees because they injure the fence a little. They will cut down every little grub, and every little tree that is struggling and get-

Digitized by Google

ting a position beside their fences. It seems to me there is nothing so tends to increase the real value and the beauty of the landscape, as living trees beside the highway, and that we ought to have the power, and we ought to exercise it, to restrain the cutting down of trees that grows by the side of the road. These trees tend to protect the traveler in the summer from the hot rays of the sun, and the cold blasts of winter.

Mr. PLUMB: This convention has rather unintentionally dropped into a channel which I take special interest in, and the paper that Mr. Seymour read brought to my mind the thought that he is with me. The cultivation and development of rural taste must grow with our growth. There must be a beginning of these things. Farmers as a rule are impatient of results. They want a tree to bear fruit immediately; they want an evergreen to be planted out, and at once have all the force of an evergreen of a dozen years. Their whole idea of a demand for immediate results is against true rural taste. Our trees must grow. I desire to watch them and see them grow up the same as my children. When this idea of the beauty, of growth, and development, and the nurturing and care which the planter has, becomes established in the mind, then rural taste will be just as natural as the love for dollars and cents; and this is the thought that I wish to impress: When we can teach our children to plant a tree, and take care of it, they will be lovers of rural beauty and scenery, and they will love to plant trees; love to experiment. We are too impatient for the result. We must get this love of the growth and development of a tree into the minds of our children, and beneficial results will follow.

Mr. CLARK, of Rock county: I don't want to occupy much time, but simply refer to some facts within my knowledge which I would have advanced after the reading of the paper previous to the last, but I thought perhaps you might want to take up the paper for discussion. The papers upon grass refer to various things, cows, and the raising of turnips, etc. I think we have got to accommodate ourselves to our climate and our situation. My opinion is that if we undertake to raise thirty acres of turnips, or any amount of turnips, we would fail four years at the least calculation out of the five; we would not get any crop. Our winters are not like English winters, or other winters where we could feed these turnips. Another fact in regard to cows, and the different grades, and breeds,

Digitized by Google

etc. I want to state a fact: In 1820 to 1827, when there wasn't any short-horns, or Devons, or any breed of cows in particular, I was in a dairy of twenty cows. I milked ten cows a day for those years, and I have never seen any better cows since among any breeds, and I have been farming all of the time, and more or less acquainted with dairies. Those cows were selected from native breeds on account of their qualities as milkers.

Mr. SEYMOUR: Does it occur to you that during the time mentioned, you were actually using stock that had been brought over, imported, and actually brought here by Englishmen during the colonial times? I wish to recall the fact that in the colonial times the well-to-do farmers who came from England, brought with them well selected stock, what you call native-stock, and the farmers of thirty or forty years ago would have more benefit from that native-stock than we have to-day.

Mr. CLARK: My object was to state the fact that notwithstanding the short-horns, and all the different breeds, that we should select and keep the best.

---

## FARM-BANKS, OR LITTLE THINGS ON THE FARM, AND WHY SOME SELL OUT AND GO WEST.

BY GEO. P. PEFFER, PEWAUKEE.

During a period of thirty-five years in the west, by observation and experience, I have seen the effects of *little things*. Care and economy in small matters have made some farmers, as well as those engaged in other branches of industry, well-to-do, rich even, while others, by neglect of these little things, were poor, and had to sell out and go west. The farmer who takes care of little things will generally have a good house, good barns, and out-buildings, good stock and tools, and a good place to put them. He takes papers, and finds time to read them, and is thus aided in forming his plans and strengthening his work. He cultivates his mind, and thus his hands are guided to do more and better work, keep his soil in better fertility, and generally to advance his own material interests, as well as the welfare of those around him. He puts his crops in in sea-

Digitized by Google

son. He has his tools in good order, his seed clean, and ready to sow or plant, and, as soon as his ground is in suitable condition, his crop is put in. He seeds his land down with clover, pulverizes it thoroughly, and uses a roller on soils benefited by being pressed or compacted together. When his crops are ripe, they are secured in the best condition, and marketed to receive the largest profits for the labor expended. The manure-pile is the farmer's bank, and he must convert everything into manure that is available. The richer he keeps his soil, the larger his crop, and the more stock he can keep; and the better he feeds his stock the richer and better will be the manure or plant-food. If little things were more thoughtfully looked after, farms would not run down until the owner could not make a living, and be compelled to mortgage his property to the merchant for goods bought, and pay 10 per cent. interest. The farmer, to succeed, must do things at the right time, and exercise judgment and skill in doing them so that they will not have to be done over again. He must keep everything in repair, particularly his fences, that his stock shall not become too familiar with his crops. He must take papers which contain the experience and observations of others engaged in his calling, and learn to think, and closely investigate the principles which underlie his business.

Secretary FIELD: There are some hints thrown out in Mr. Peffer's paper just read, which are worthy to be considered. I think, gentlemen, there are a great many farmers in this State to-day, judging from what I see in traveling about the country, that will be obliged to sell out and go west soon, unless they manage in some way to increase the fertility of their soil. This bank account he speaks of is a very good bank account, if you will only take care of it; but there is no bank that will continue to furnish money if the parties keep taking out, and don't put something back. The farmers bank is the soil. If he continues to deposit material which is food for plants, and then puts the plants into that soil in the proper way, at the proper time, puts that land in a condition so that the plant-food can be taken up by those plants, and they germinate, and grow there, why he will have a bank account always. He will be sure of having something there on which he can rely in old age, sickness, or at any time. These common bank accounts, one seems

Digitized by Google

to check out faster than he puts in, and that is the case with many of our farmers to-day, their accounts with their bank—the soil—has been overdrawn, and if they do not deposit soon, bankruptcy and ruin must inevitably overtake them. The idea advanced is an excellent one, and one we all should profit by.

Mr. MAIN: I have spent a great deal of my life in trying to get farmers to meet and exchange ideas. I found it was among the hardest things I ever attempted. I have concluded that the only chance is to show them by actual experiment. There is a part of creation who can never understand anything by reading. If they see you perform a thing, if they see you cultivate a tree, they will probably imitate it and cultivate that tree as well or better than you can; but you can sit down and spend a week telling them how to cultivate that tree, and they will never understand. I think the best thing for those who can understand without seeing the actual experiment, is to go forward and do these things, and allow them to learn in their own way.

Mr. ANDERSON: The paper I think is not an overdrawn picture of a great many farmers in this country. I think it is a very faithful picture, and represents a great many such farmers. There are a great many such farmers all over the country, more so in the west than in the east. In the east the farmers haven't been so negligent; many of them have been settled on farms for a generation. There is no doubt that it is a sad picture. A good many farmers in the west do not think they are running down their capital as rapidly as they are. They don't think their farm is their savings-bank, and every deposit there is to their credit, and every draft upon the bank is taking from their capital. I saw a statement awhile ago that a farmer bought a farm at $40 an acre, two hundred acres, paying one-half down, and the other $4,000 he went in debt for. He thought he would not spend much on the farm, and pay it off as soon as possible. He put in wheat all he could. He had a good crop, and was enabled to pay his interest. The second year he put it all in wheat again, spent no money, couldn't afford to buy stock and improve his farm. He made a few hundred dollars less the second year, and paid his interest. The third year he was not more than able to pay his interest, and from that on he found his interest was all that he could pay. At the end of seven or eight years he found his farm had so depreciated that it was not worth more than the

Digitized by Google

$20 an acre he had actually paid on it, so that he had not only lost all his time, but he had lost $4,000. If that farmer could have once been satisfied that his farm would pay to keep it in a good state of cultivation, he might have been able to pay for his place, and had his farm, worth $8,000, at the end of a few years.

Mr. CLARK: Inasmuch as something has been said during this meeting in regard to establishing an agricultural paper, I wish to relate one circumstance in connection with that. A young man, a distant relative of mine, who, through my influence, had purchased a small farm which he was able to manage, was at my house within a year. I said something to him about taking an agricultural paper, and that it would benefit him. He was a good worker and had time to read. He objected to it, and said he didn't think much of this book-farming; it was not practical, etc. I said to him thas it was not expected that everything was practical in every place. We are governed by circumstances, but to bring him directly to the point, I related one circumstance in relation to my own affairs, and that is what I shall state. In the spring of 1858 an agent came around with what was called Jones' corn-planter. It planted by hand, two rows at a time. I bought one; I admit it has been a good planter. One of its greatest recommendations was that it was a sure preventative of gophers taking up the corn. We had a good many gophers in our vicinity at that time. I planted it deep, with a firm faith that the gophers wouldn't find it. There were plenty on the prairie where we lived. Right after I planted I was called away as a juror. When I returned, my corn was pretty well used up. I found it was just the thing for the gophers. The rascals saw the mark the planter had made, and took the corn. It was too late to plant it over, and I told the young man that I estimated that I lost $200 that year on that piece of corn. Now, I said to him, I have learned something. Necessity is the mother of invention. The next year I bushed or harrowed my corn as fast as planted. I never went to dinner without having it all bushed or harrowed. I have never been troubled since with the gophers. Now, I says, if some one had found that out before I did and published it in the papers, instead of getting the information the way I did, I could have received benefit from it, and probably have saved about $200.

Digitized by Google

A VOICE: I would like to ask whether you consider it a cure for gophers taking the corn.

Mr. CLARK: I don't consider it a cure, but I can state I never lost much since. That is a cure for the time being. I have not known them to get my corn until it would begin to come up, if it was harrowed, Just before it gets up, I harrow it again; that will act as a protection against the gophers.

Mr. DAUBNER: I was going to say if that has cured them, they are not the kind of gophers we have down in our country. I want to say something in reference to that paper. I consider that paper as an exact picture of a great many farmers of this country to-day; not only small farmers, but some quite extensive farmers, that consider themselves first-class farmers; but the point seems to be how shall we enlighten this class of men. We have gone on in this convention, and have made statements in regard to certain things, but we have not given the remedy. What are the best means to reach that class of men, and improve them, and get them on a different course. You might almost say it was impossible; that it could not be done; that they were entirely hopeless, from the fact that that class of men are bigoted. They know more than any one else can tell them, and they consider their method or way is THE WAY. They look upon this agricultural society as a ring and a clique, and they consider that these men that come here are not actual farmers, but the president of some university or other learned men, who gather their knowledge from books. Now, these granges that have been established throughout the country, certainly ought to do a great deal in bringing up this class of men, but even those fail in a great many instances to reach them. They look upon them as a combination of some kind or other, and will grumble at the little sum charged for the initiation fee in those institutions. There were thirteen men in this city to-day with wood to sell; how many of them knew there was an agricultural convention held here at the capital? One out of the thirteen. How many of them knew that there was a State agricultural society here? Six out of the thirteen. They were selling wood right in this market, and didn't know there was an agricultural society, and wanted to know if I didn't mean the legislature. That is a fact. If we can't get that class of men instructed, this complaint of moving west will continue. They will go through a life-time, and die

Digitized by Google

with their heads gray, and be no better off than when they started. I am myself a practical farmer. I understand perfectly well what good farming is, and so far as it is in my power I try to do it. I find a man that starts out in life without anything has got to make something, and this has been my condition. I started in 1861 by enlisting in the army. I came out with a couple of hundred dollars, and I have now a good farm with a fair amount of stock. I got it by rigid economy, and hard labor, and by posting myself on the best methods of farming. I think in these conventions we ought to talk up more the propriety of assisting and helping that class of men.

Mr. DWIGHT: The question has arisen in my mind, does the average farmer ever farm any better than he is compelled to? I see men every day or two who say they wish they could raise wheat as they did twenty-five and thirty years ago, turn the sod over, and shake on the seed. I recollect of sowing wheat, and raising thirty bushels to the acre, and harrowed it in with two pieces of rail with wooden teeth. Don't we learn more by adversity than by success. A gentleman cited me to the fact that all of his adversities had been sort of educators to him; that he had learned more from adversity than he had from prosperity.

The majority of farmers to-day, if they are in easy circumstances, are what might be termed prudent, economical men. I think the average of farmers don't farm business-like. They don't understand exactly what it costs to raise a steer, or what it costs to raise a pig; to produce a pound of butter or a pound of cheese, or anything of that sort. They rather dread what is called mixed farming. It takes more time, more talent, more thought. If a farmer has a mixed farm, he has to be at home. He can't be off to the store. Go to Brooklyn or Oregon, in this county, and you see a class of farmers sitting in the village store, talking nonsense. In these granges it is almost impossible to get them up to discuss an agricultural question, or economic question, or any useful question. They seem to be like children, they admire the forms and ceremonies, and dispute on points of order. I have tried to get them to discuss the question of what it costs to raise a steer, or a pound of pork, etc. When you call on them they will say, "worthy master, I don't think I can add anything to what has been said on this question." I think the great trouble of the average farmer is want of self-re-

Digitized by Google

liance. They are apt to take their cue from other people. As Mr. Main has said, they *do* learn by observation, they *don't* read enough. I know farmers in our town who don't take a newspaper. They have no books except the almanac, a bible, and an old spelling-book. They don't seem to appreciate the necessity of an education; to read, to think, and to compare; so I think the first step is to get them awake to see their situation, and see the need of improvement, and to do this, farmers' clubs, etc., are having an effect. We are apt to desire great effects at once. It is so much easier to let others do the thinking than to do it yourself. It requires an effort to think; in fact it is harder than to labor, and the thinker, and the worker co-operating together, generally succeed the best. Then farmers work so many hours. When men work from fourteen to sixteen hours in a day, they are so exhausted that when they sit down by the fire, they immediately drop asleep. That, I think, is one reason why the young men, some of our boys, brought up on a farm, see a life of drudgery in it, and they naturally want to flee to the city. I think the best way to keep our sons at home is to improve ourselves at home. Surround them with plenty of books and periodicals, also music as much as you can. If you can't do as much as we would wish, we can get a fife or a flute, and work up to an organ. Do it through the grange, clubs, and associations of that sort, and lift them up to the proper standard.

Mr. CLARK: I would ask if the man who excused himself, didn't the next time, or soon after, make some improvement.

Mr. ROBBINS: If you cannot get the average farmer here, the question is how can you reach him? I think they ought to be reached in some way. I supposed the masters of the granges gave all the information they got themselves, and enlightened their grange thoroughly. I have never been into one of those granges, but I have thought frequently that I could receive great benefit thereby. The idea I want to throw out is this. You have your proceedings published, in book-form and if they could be placed in the library of clubs and granges, and there read and discussed, they would be of great benefit to the farmer. I know I have saved two or three hundred dollars by being here at the last meeting. I hadn't time to go and tell my neighbors what information I had received here. If I had been master of a grange I would have appointed one or two special meetings, and have told my neighbors what I

Digitized by Google

learned there. I believe these discussions in these agricultural conventions once a year, are of more benefit to the farmers, than any other thing that comes before the convention. It is telling experiences. I would suggest to the masters of the granges, that they deliver a lecture about once a month, upon practical farming, not theoretical. They should ask their neighbors, how did you succeed, and why did you succeed? To those who failed, what was the cause of your failure? The farm I own now, in 1846 produced forty-five bushels of wheat per acre without any fertilizers. Some of this land has grown a crop of wheat every year for thirty years. I know the properties that went to make those crops are all taken out of the soil. I have *gone to grass* to some extent. I have learned that I must *go to grass* if I want to grow a crop. Now, I have over one hundred acres of grass on my farm, not over half of it good sod. It didn't more than half catch. I believe if I had known as much last year as I do now, I would have succeeded. I understand, now, I must sow my plaster with my seed. The failure heretofore has been my grass seed has not caught; putting the plaster on has made a better crop. I have been farming forty years, and yet I know very little about farming. I have tried some experiments and am improving.

Mr. DAUBNER: I want to know whether you take an agricultural paper?

Mr. ROBBINS: I took so many of them that I couldn't read half of them.

Secretary FIELD: The trouble with Mr. Robbins is, he started to do too many things.

Mr. ROBBINS: I find now, I have to go to farming. I used to think I could get information at the store, but I find that I cannot.

Mr. ANDERSON: Mr. Robbins thinks the masters of the granges should once a month deliver a lecture. We have an officer in the grange whose duty it is to deliver a lecture at every meeting.

Mr. HAZEN: I have felt a deep interest in the remarks of the gentleman last up, rubbing up the granges a little. I was one once, and believe I am yet. Common farmers in our section of country, and grangers, I believe, are not in the habit of cropping one piece of land thirty years in succession; any farmer that would do that, ought to *go to grass*. I attend the agricultural meetings and keep posted as well as I can; I confess there are others in our

Digitized by Google

neighborhood who know more about book-farming than I do. Mr. Robbins says he is going to sow his plaster with his clover seed, and then it is going to catch; he may find out he is mistaken. A man may get up before a meeting of this kind and tell what he has done; he may have been successful on his farm in certain localities, with certain seed, and another man may try it in another part of the State, and it would be a total failure; that has been my observation. I failed at farming, this last year, and it was the worst failure I have had for thirty years, and I havn't cropped my land for thirty years in succession either. I intend to rotate my crops as well as I can. My failure was on account of my farm being too rich to raise crops of small grain; it lodged down, and it cost me to harvest it more than it was worth. Had a heavy growth of corn, and the frost spoiled it pretty much all. The farm-crops were pretty much all a failure. My grass was first-rate. I made a larger amount of butter and cheese than I had for a number of years. I cut up my corn, and it has been better fodder than if it had dried up after the frost.

Mr. HIRAM SMITH, of Sheboygan Falls: The two last speakers, Mr. Hazen and Mr. Robbins, seem to insinuate that going to grass is a sort of epithet. I think if we will consider that going to grass is almost synonymous with going to glory, it wouldn't be so considered. I am happy to say that I went to grass some fifteen years ago, and I find no deficiency in that bank-account. My bank of soil is just as good for eighty bushels of oats now after my cows have run over the grass-land for fifteen years. I never got any notice from that soil that I have overdrawn, if I checked for eighty bushels of oats to the acre, and I attribute it all to the success of going to grass and keeping cows. We may talk about renovating the soil, improving the soil; unless we adopt some system of farming that must make it a necessity we shall fail. If we go into the dairy-business, raising cattle, we can not by any possibility escape the necessity of renovating the soil. After new beginners go into the dairy business their confidence is shaken by the depreciation in the prices of dairy-products, but in fact it is far less than any other branch of industry. The depreciation in price is very light. A pound of cheese buys to-day more sugar in comparison with the amount of labor it costs to produce a pound of cheese than formerly.

The difference is apparent, not real. We can make money in

Digitized by Google

pursuing the dairy business, with prices as they were this last year. They are equal to former years and much better than in the older States. Our lands are about half price. Our cows don't cost much. The older States will ultimately have to leave the field. They cannot produce dairy-products, unless they produce at a loss, while we may produce at a profit which will ultimately increase our capital. If we over-stock our farms; if we undertake to carry a few more cows than we have the means of feeding, and if we have to buy one hundred and fifty or two hundred dollars worth of feed to carry them through, we consider it so much lost. Experience has taught me it is no loss. I would rather have plenty of stock even if I had to buy feed for them. The results from the cows furnish us the means to buy the hay. The additional hay adds to the richness of the soil.

Secretary FIELD: I would like to ask Mr. Smith how it is with his neighbor who sells the hay to him.

Mr. SMITH: That is his business. I think we invariably teach by example. If one man has more success than another; pursues one branch of farming, it is not long before another imitates it. A person builds a nice board fence by the road; he puts up a nice house, or a nice barn; it will be seen that his neighbor will imitate him. They don't like to be left too far behind.

Mr. HAZEN: I get eighty bushels of oats very frequently, and I don't consider it a fair crop if I don't get seventy-five bushels to the acre. This year my oats lodged down. I sowed corn on sod-land where it was pastured seven or eight years. Broke it up last spring and planted corn. The cut-worm bothered me some, though I succeeded in subduing them and I got a good crop of corn. Had my ground all plowed in the fall, an unusual thing for me. I sowed oats on that, and they grew too heavy. I think if I had plowed in the spring I would have had a better crop. On sod-ground for corn, I prefer to plow in the fall by all means. These prairie-farmers in our vicinity that raise grain on fall plowing, say it invariably lodges and bothers them, and if it is plowed in the spring it stands up better. That seems to be the great trouble, to have grain stand up so that it will fill well.

A VOICE: I would like to have the gentleman tell me how he subdued the cut-worm.



Digitized by Google

Mr. HAZEN: I don't buy a great deal of hay. I do buy some. My corn-crop was short this year. I got a car-load of corn from Milwaukee; as I said before the convention once, I have a mill of my own and grind it a little cheeper than I can buy ground feed. I prefer to keep as many cows as I can keep, with the expectation of buying some feed to keep them through. I prefer to do so rather than not have as many as I can keep, under favorable circumstances. My pasture I didn't plow until spring. I planted my corn and it came up very nicely. I watched it closely and was expecting trouble from the cut-worn. As soon as the cut-worm made its appearance I had five or six men working for three days. They thought it was pretty small business for a good, strong man to be digging around the corn-hills and killing cut-worms. They dug out five or six in a hill. If you plow your land early in the fall the cut-worm will not trouble you much. That we found in investigating the matter, and talking it over in the meetings at Fond du Lac. My neighbors raised corn on sod-land and planted an early corn, but didn't plant until about the first of June. The cut-worm is of short duration, and will disappear before the corn is up. One of my neighbors there, Elder Whiting, is a very successful farmer. He says he has not failed getting a good crop of corn in that way. He never plants until the last day of May or first of June. By the time the corn comes up the cut-worm is out of the way.

Mr. ANDERSON: I have no trouble with the cut-worms. I have always planted corn on sod-ground—but with that grub-worm, a white worm with a brown head I have been troubled. Plant your corn deep enough, and the cut-worm always cuts it close to the top of the ground, and it will sprout out again. That grub-worm is my trouble; that is the reason I don't have any old sod on my place, for this worm breeds in old sod. It comes from the May beetle that deposits its egg in old sods, in manure-heaps.

Mr. DAUBNER: I should like to say a few words in regard to that little brown worm. I never lost a crop of corn with the worm. I live near Milwaukee, probably on a stiffer soil than these farmers. I never plow my ground in the fall. I plow with a plow we call the skimmer. It has a small plow in front of the other. It just cuts and covers probably four inches. Then your mold-board comes on, and turns it over. After plowing with a plow of that

Digitized by Google

kind we can cultivate with two horses, across those furrows, and not tear out the sod. You would hardly know in crossing the field after the ground was dragged that it was a sod-field. I planted my corn on that. The cut-worm goes down with the sod, and the sod rots, and by that time the corn is out of the way. I have seen corn entirely destroyed on my neighbor's, who plowed with the common plow, while mine was a good crop. The large white worm that Mr. Anderson alludes to, we have not been troubled with.

Mr. CLARK: I have used the same kind of a plow, the Michigan double plow, for the last fifteen or eighteen years. I have always plowed in the spring, and turned this sod under just before planting, and have had the same experience. I have had neighbors that used a common plow and their crops have been used up, while mine were saved.

Mr. DAUBNER: It is of simple construction, and it only costs three or four dollars. You can fasten it on any plow. It makes a little more work for a team to pull it.

Mr. PLUMB: I want to bear testimony in relation to this question of grass. I have discovered in my traveling around the country that there is a great dividing line between those who raise grass and those who do not. A grass-growing farm is growing richer, the land is improving yearly. On the other hand, there is a class of farmers who don't raise grass. They simply want to raise grass for hay. There was one farmer I asked last week, in Columbia county, "Why don't you seed down your farm?" He had eighty acres under plow, and he had poor crops. Says he, "My farm will not bear grass." I am satisfied that a great many farmers have reached that point where their farms will not bear grass.

Digitized by Google

## SUCCESS vs. FAILURE IN WISCONSIN ORCHARDING.

BY J. C. PLUMB, MILTON.

The early decay and premature death of so many of our fruit-trees, is a matter of serious importance to a State that consumes annually not less than one million bushels of apples, beside the small-fruits, green and dried, of nearly equal cost to the consumer. Of this immense quantity, estimated at two million dollars worth, not less than three-fourths of which at this time is the product of other States, or the sum of one and one-half milllion dollars, are paid out annually by the people of this commonwealth for fruit we can produce on our soil, and will when we understand the conditions of success. This demand for fruit will never be less, but will be annually greater, beyond the ratio of increase of population. Of our ultimate success in this branch of industry I have no doubt. But how long we must wade through seas of disaster before we overcome the prejudice or pre-conceived opinion which now prevail, and climb the mount of success, I know not; but I do feel that in the face of the great losses of the past year we may now take the lessson and learn it well; then take a new departure in tree-planting, with every reason to expect success in the future. The success or failure of our orchards of to-day, rests on three primary conditions, viz, location, varieties, culture.

First, the locations generally chosen are not suited to the nature of the tree, but in fact exceedingly adverse to its life and health. Soil too rich in *humus,* or vegetable matter, producing excessive and prolonged wood-growth, inducing fire-blight, with the attacks of fungoids, bark-bursting, and frozen sap-blight, inviting the borers in to complete the work, and revel in the feast of decaying sap. Warm, sheltered locations, with a sunny aspect, have proved a great curse to the fruit-growers of the west. Ninety-nine per cent. of all the trees heretofore planted in such locations have or must prove a loss and disappointment to the planter. They have some of them

Digitized by Google

been filled up or replanted for the second or third time. But few varieties can be used with safety in such places, and these need especial care until they are well established. In filling in the old vacancies, use only such varieties as are perfectly satisfactory in the same locality, or still better, some of the exceedingly hardy varieties now grown in most nurseries, as Walbridge, Duchess, and Plumb's Cider, with Utters and Fameuse, if you dare to. But, if you can do no better, plant some of the improved Siberians, of which there is now a fair list for all purposes and seasons, from the sharp tart and the mildest sub-acid, to a pure sweet. I mention this to show that no utter failure need be experienced, but that all may provide themselves with good home-grown apples, provided they adapt themselves to the natural conditions and surroundings.

A combination of the first-named conditions of warm aspect and rich soil, in connection with our climate of extreme and sudden changes of temperature, has brought a stigma upon the pomology of our fair State, and discouragement to tree-planters that has become a serious bar to our progress toward home production.

This general destruction of so large a portion of these south side-hill orchards, especially those that have a dense shelter from the west winds, is most disastrous and wide-spread, from the fact of these locations being chosen or prepared for the greater portions of the original plantings, and hence continued from mere force of habit or blind notions of the past.

That there should be a radical change of practices, any one may see that will look around for the examples of success or failure. In one trip of ten miles overland, from Poynette Station to Rio, in this State, I passed thirteen orchards, all on a southern slope, with more or less westward shelter and wind-breaks, except two. All of these sunny-side and sheltered orchards are deemed a failure; some of them a total failure. The two which are a decided success are on the north and northwest side of a woody bluff, with a gentle slope to the north. These orchards have been growing and fruiting for the last twenty to twenty-seven years. They are remarkably fruitful, and have every promise of long life and vigor. These orchards are the property of F. C. Curtis and his brother, Rocky Run. One orchard of ordinary trees, two hundred in number, owned by M. N. Peck, was

Digitized by Google

planted in 1860. Trees are looking finely, healthy, and vigorous, and produced, in 1875, 400 bushels of fruit. This orchard is on the crown of the hill—on the northwestern summit of one of the highest bluffs in that part of the State—not less than one hundred feet above the railroad, at its highest point or summit. This is a good white-and-black-oak soil; has no sort of protection or wind-break from any quarter.

I found a small orchard similarly situated in the town of Windsor, Dane county, on the highest prairie in that township, and its success as marked. Another orchard of four hundred trees on the exposed top of the highest prairie-bluff in the east part of the town—planted in 1862—is known as the most healthy and fruitful-bearing orchard of Dane county, and are marked exceptions of the general failure of the orchards of the vicinity. These cases are cited as fair samples to show the bearings which aspect has on our fruit-interests. They are repeated in almost every township and county in the south half of Wisconsin. Why not heed the lesson? This is the greenback of pomology. It will bear expansion to meet the greatest demands of the people, and no repudiation need be feared. Of varieties, we will not enumerate. but recommend every planter to look about him, and after ascertaining what does well in locations similarly situated to his own chosen one, plant of them mainly. The great variety of soils and other local conditions which prevail will modify the list of varieties that would be safe to plant in any distinct section of our State.

The culture of orchards must also vary from any specific rule, as other conditions vary. We urge the exercise of a fair amount of common sense in this matter, as in the feed and care of a horse or cow. Excessive feed produces excessive growth and delicate structure, which cannot endure the extremes of our climate. Our advice is to "go slow," but always secure vigor and progress in the tree. On medium soils annual culture may be necessary. Do not feel that this culture is lost unless a secondary crop is gained by it. Ordinarily it will be better to cultivate but little, and remove nothing from the land. Better anticipate the future events; let the soil grow better by rest. Very rich soils may need the check of grass to save the trees, but there is no possible excuse for any considerable pasturing of the orchard-ground. In this dry climate, our soils need all the moisture they can retain. Pasturing does not

Digitized by Google

exhaust the soil but it does compact the soil so that it cannot retain the falling rains or melting snows. "Root-killing" is one of the most frequent forms of injury to which our trees are subject. This will not occur when the ground is well filled with water—hence a frequent stirring of the soil, or a light mulch left on its surface through the year, are imperatively demanded. The highest style of orchard-culture is to let some natural herbage grow on the surface, which should be mowed and left on the surface, each month of the growing season. Without pursuing this subject further, I will recapitulate by recommending as I have for the last twenty years:

First. To plant on the hill-tops, or cooler slopes of the hill.

Second. To plant such varieties as have proved successful in your several localities.

Third. Cultivate or not, as may seem best for the health and progress of the tree, but all culture should be for the tree more than for any secondary crop you may get from the land.

We are told that success is the exception, and failure the rule in our State. This may safely be reversed when we observe and follow the lesson we may learn from the exceptional success of any one tree or orchard of our own immediate neighborhood. *Like causes produce like results.*

Mr. PLUMB: These orchards mentioned in the paper are all on timber-land. I would cite those, who have an opportunity to visit it, to the orchard planted on the State farm. There is an orchard of about four hundred trees, planted in 1867 and 1868, and out of that four hundred trees, the first year after they were planted, there were a few of them that grew late. They were killed by the bark bursting, after the first hard frost in the fall. There are one or two of those trees that have root-killed since that time, but out of the four hundred, up to this date, only twenty-five, or thirty as Professor Daniells informs me, have been renewed. That orchard is what you would call perfect, If you visit Ohio or Michigan, or any of those fruit-growing States, and you see an orchard doing as well, you say, "now there is the place to raise fruit." On the University Farm, the same varieties were continued over on the southern slope of the hill, in order to test the location. Those have been re-

Digitized by Google

newed, and only a few trees remain on that south side of the orchard; only those iron-clads that you find hard to kill. I would go on and repeat examples of this kind, but I wish you to examine for yourself in every town and locality in the State. In 1857, after the hard winters of 1855 and 1856, I arrived at the conclusion which I have to-day. I wrote an article for the old Wisconsin Farmer, of which Mr. Hoyt was the editor. If any of you will turn to the volume for that year, you will find it. I wish our farmers had learned that twenty years ago. It would have given us that million dollars worth of apples which we are now purchasing. This matter of location is the greenback of pomology. It will admit of indefinite extension and no repudiation. That is, extension to meet the demands of trade and commerce.

QUESTION: Will Mr. Plumb state what he considers the Iron-clads.

Mr. PLUMB: This is a delicate subject. Our State society after recommending list after list for the last ten years, at our meeting last week, concluded not to recommend any list. We are free to recommend as individuals. I can recommend three varieties. The Dutchess of Oldenburg as a standard of hardiness for its season. Do you ask for simply the hardy ones?

QUESTION: The Iron-clad. The exceedingly hardy?

Mr. PLUMB: We also consider the Fameuse one of the Iron-clads, yet it has failed in different places. We have a variety largely disseminated throughout the State called Plumb's Cider, which has proved equally hardy in almost every section. We have another; I have had it growing in the neighborhood nine or ten years. It appears to be very valuable. We probably will call it the Walbridge. It appears to be the Gennet of Wisconsin. The testimony for twenty years in Rock county and Jefferson county, and a less number of years in other parts of the State is, that it is an exceedingly hardy tree; a great bearer, and a fine eating apple; an apple that sells readily from six to eight dollars a barrel in the month of May, and keeps equally well with the Gennet, and retains its acid better.

Mr. PEFFER: Mr. Plumb remarked that we don't recommend any variety particularly. We have come to the same conclusion that the Northwestern Fruit-Growers Association did in 1858. They concluded at that time they didn't know anything about fruit-

Digitized by Google

growing. I believe we came to very nearly the same conclusion, and that is the reason there was no special variety recommended; but those Mr. Plumb spoke of I can heartily endorse as far as my experience goes. I won't go any further; and we came to the conclusion to let every man that wants to plant an orchard, visit his nearest neighbor that has one, and see what varieties have done the best with him, and do likewise.

Mr. BINGHAM: I would like to ask Mr. Plumb one question with regard to sheltering orchards; whether he considers it essential to plant forest-trees, or any kind of trees, on the west and north side of an orchard, that will shelter it somewhat from the severe winds. I will give an instance of an orchard in the southwest part of the State, in Grant county, one of the most flourishing orchards in the county, situated on the north slope of the hill, on the open prairie, where there was no timber at all, sloping toward the north. At the time the man planted his orchard, he planted a double row of white willow, which has grown very rapidly, and made a great wind-break. His orchard is very thrifty. I would like to have Mr. Plumb's opinion whether that wind-break has anything to do with the thriftiness of his orchard.

Mr. PLUMB: My conclusion is that, with a healthy tree, they require no such protection, because those orchards that I have stated as remarkable cases, have no such protection. I can give you a good description of over two hundred orchards that I have visited within the last twenty years, bearing on this point, and I wish to speak very moderately; and the testimony accumulates, not only in our own State, but in Iowa, Minnesota, and Missouri. I said to an old friend of mine, "plant your trees on the coldest spot you have got;" he wouldn't believe it. Now, he says, "you are right." Ordinary trees require no protection, except from violent winds to save their fruit. Let me remark, on this very point of protection, we need protection as much from the sun as from any other source. You go into your old orchards and you find the southwest side deadened. It has been produced by the warming up of the southwest side, by the sunshine, from one to three o'clock, which is the warmest part of the day. That portion of the tree is warmed up, and the sap starts, and, on a sudden freezing, the bark bursts and cracks the wood. That process, repeated from day-to-day for two weeks, destroys that side of the tree. Farmers say, "what is the

Digitized by Google

matter with my tree? It is dead on the south side." I say to them, "make it a north side all around." They say, "how shall I do it?" Set up a board, tack two laths together, any way you can devise to make it the north side of the tree all around, and you will avoid all that deadening. Trees die. There are three or four distinct primary causes that cause the death of the tree. In one case it might be root-killing, from absence of water in the ground in the fall. There may be so much water in the ground, possibly, that it will be so full of sap that it will fail to mature its wood.

Secretary FIELD: You speak of shading or protecting a tree from the hot rays of the sun, from one to three o'clock. How large should that tree be before it requires such protection?

Mr. PLUMB: It needs it immediately; it needs it always, and there is an argument in favor of low trees, and allowing them to spread, that they will then shade themselves after they get older.

Secretary FIELD: I have heard from some fruit-men that they don't think it at all necessary that they should be protected until they become of considerable size, as large as one's wrist, or larger.

Mr. PLUMB: There are those people who don't believe in locking the barn until after the horse is stolen. There are several causes which produce the death of the tree. You must find out the cause; to find out exactly why the tree dies. I want to say a word in reference to pasturing orchards. I am satisfied, within the last five years, that a large portion of the trees that have died in Wisconsin, have died on account of a want of water in the soil; packing the soil around the roots by pasturing, or any cause. Whatever packs the soil so that it cannot retain the fall rains puts the tree in winter quarters dry. Take a tree and set it in a tub, and fill the tub with dry soil or sand; will the tree survive the winter? No, of course not. It will die. Fill that tub up with water and it will survive. The water will retain the vitality of the tree. In order to insure against root-killing there should be sufficient water in the soil. A tree never root-kills where there is sufficient water in the soil.

Secretary FIELD: Couldn't that be obviated on most soils by a little mulching around the tree?

Mr. PLUMB: Yes; I advocate mulching, but when will you apply it?

Secretary FIELD: Whenever needed.

Digitized by Google

Mr. PLUMB: Like some farmers do, in December, when it is frozen up. You want nature's mulching. You take a lawn that is sheared frequently and dig down and you will find all the roots short—a short top has a short root, a long top has a long root. Shear your trees and the roots will be short; they will be small comparatively. That is a very important thing to keep in mind.

Secretary FIELD: I would like to ask as to the benefits or injuries that might arise from seeding down an orchard to clover or other grass, particularly prairie soils.

Mr. PLUMB: That is an important point. An orchard should be cultivated not for the sake of the crop, but for the good of the trees. Every farmer should think that every tree in a little while is worth an acre of land. With that in view, the use of a hundredth part of an acre, that a tree occupies, is a very small thing; therefore, I say always keep that in mind, cultivate, and what little you reserve from the orchard, in the shape of grass or pasture, is of no consequence whatever. It is not worth mentioning. I do want farmers to stop this pasturing the orchard. The results are not apparent immediately. You think, if the sheep or horses don't gnaw them, and the hogs don't tear them up by the roots, it is all right; if they do, you think you can spread on a little manure, and cure the effect; but you can't do it. The packing of the soil is one thing you want to avoid in an orchard.

Mr. ANDERSON: Don't that depend a good deal upon what kind of soil it is. On my soil I don't think it would do. I mulch my trees.

Mr. PLUMB: Do you mulch outside the drip of the top?

Mr. ANDERSON: I mulch according to the size of the tree.

Mr. PLUMB: Your feeding-roots are outside of the drip of the tops.

Mr. ANDERSON: I strive to pasture my field every year with hogs.

Secretary FIELD: You mean to state that the tree derives most of the nourishment for the production of fruit, and the growth of the tree outside of these six feet you spoke of.

Mr. PLUMB: That is it; when a farmer cultivates the area under the drip of the top, he thinks he is doing a good thing. I tell him, let that alone; cultivate outside. I wish to cite here the instance of the death of our native oaks. Every farmer knows that if he allows stock to stand around an oak tree, black-oak especially, it

Digitized by Google

will die. With all the theorizing on this point, I am satisfied drouth is at the bottom.

A VOICE: They die where they are not pastured.

Mr. PLUMB: It is a want of moisture. The grub-worm that you will always find there is a secondary cause. They are not the primary cause. The primary cause is the want of moisture in the soil.

Mr. HAIGHT: I would like to ask Mr. Plumb whether he would consider it a good practice to seed clover, and allow the crop to die on the ground from year to year?

Mr. PLUMB: That would depend upon the nature of the soil. If it was soil like Mr. Anderson's, it would be a very safe practice. It might rob your trees in the summer-time when they need moisture —mowing would be better.

Mr. HAIGHT: My experience is that it re-seeds itself; sufficient seed falls to continue the clover. I don't cut it at all.

Mr. JOHNSON: I had a small orchard I planted twenty-two years ago this spring, when I first came into the State. The location is on the north side of a hill, probably fifty or sixty feet high; it is white-oak openings. I grubbed it and planted the trees the first year I came in. I got my trees from Rochester, and then I undertook to grow an orchard without any fence around it. That I found to be a failure. If I left home, when I came back the cows were in the orchard and twisting the apple-trees all around. I got mad and probably swore. I went to work and filled up my orchard again, and kept a fence around it, and plowed it, and worked it, mulched my trees; had good success until 1856 and 1857, those hard winters. When I gave my orders for trees I got two or three of this kind, and two or three of that kind, a variety of trees, so I could make a good show at the county fairs. The first thing I knew two-thirds of my orchard was gone up. I then examined my trees, and found out what kinds I had left in the orchard, and I made up my mind if I couldn't raise tame ones I would raise wild ones; they were better than none at all. There came a man around, and I told him I wanted a few trees of one kind, and a few trees of another. I had planted mostly of the Golden Russet. I planted my trees thirty feet apart. I thought it was a good deal of land to waste for a few trees. I went to Mr. Peffer at one time to fill up my orchard, and I got trees of him. I got the Golden Russet and the Maiden's

Digitized by Google

Blush. I think it is fifteen years ago; I got those trees to fill in; I fill in every spring. I have trees that yield four or five barrels of apples in a good season. The first season of my orchard's bearing, it bore one apple. We went down one Sunday, my wife and I, and the six children, and got that apple. The next year I made up my mind it was working a good deal of ground for a few trees. I sent down to Rochester for a hundred trees, and told them to send up big four or five-year-old trees. He filled my order to my satisfaction. I never saw nicer trees in the world. I went to work and planted them out between the rows one way. I made up my mind in a few years more I would plant them another way so that I could get them fifteen feet apart. In a few years I saw that I could not get in with a team. They have done well.

The way I have treated my orchard is, to keep it well mulched—I have plowed it once in four or five years; I am going to plow it this spring again; I havn't plowed it for four or five years, consequently the grass has got in; this is where I sowed the alsike clover. This June grass has run out the clover. The hogs have always taken possession of my orchard; I want to keep them in there until the fruit gets ripe, for the very reason that when an apple drops there is a worm in it, and the hog has the apple and the worm too. I have had all the apples I wanted for my family, and I have had apples to sell; I make twelve barrels of cider, and we have all the dry and green fruit we want. This year I am going to plow it up and spade around my trees; I am going to the lime-kilns in the spring and get about two barrels of lime for my orchard. I take the boys in the orchard and scrape down the trees; scrape them thoroughly; never mind if you take a little bark off, its so much the better. Once or twice a year I whitewash the trees thoroughly; when my whitewash falls off of the bark, it is as smooth as can be. I can take a tree, I don't care how lousy it is, and in whitewashing it twice it will be as good as a tree that never was lousy; that is my experience in making an orchard. My orchard-soil was heavy white-oak clay. I would further remark that you want a location so that the water will get away. A neighbor of mine made a pasture of his orchard two years ago last spring; he says to me he didn't have an apple for his own use. He had an orchard that used to grow bushels of apples when I came here, when I didn't have an apple nor an orchard; he made a pasture of

Digitized by Google

his orchard; I told him he would repent of that; the horses kicked around the trees, and the cows would go under the shade. I said, you are going to kill the trees; he said: "Oh, no, he wouldn't." Last spring he said my trees are all dead. I said, put your hogs in your orchards; it is essential for them to be there; it lessens the worms in the apples. The trouble in our State is that the apples are not perfect. You take a barrel of apples to Milwaukee, and they ask, "what is the trouble with the Wisconsin apples, they are so wormy." The hardiest kind of fruit I have is the Fameuse, or Snow apple, and the Golden Russet. I can sell my Golden Russet; they are the nicest apples I have; make the nicest sauce, and are good keepers.

Mr. DAUBNER: I would like to inquire if you ever had any difficulty in making new trees stand where old trees had died out?

Mr. JOHNSON: Those places where old trees have died, I clean everything out, then I bring fresh soil. The only difficulty is, I can't get trees big enough to put in unless I take them out of my own garden where I have planted them. Give me a tree four or five or six years old, with a good root, and I take the top off of it. The great trouble in planting trees you get more top than root.

Mr. PLUMB: I would like to answer the question in regard to refilling. It is the standing complaint among farmers that they cannot make a tree grow where they fill in. I find, in a majority of such cases, that they undertake to refill in grass, or under some such adverse circumstances. They dig out a large hole. They plant and mulch. So far it is all right. They think they have done their work for the season if they mulch a space a few feet across. Such is not the case. Within three feet of the tree they mulched, the grass roots have sucked the nourishment and moisture. The grass is as much benefited by the mulching as the tree, and more. What is the remedy? You must cut off that grass. Grass roots will run three or six feet without any trouble. So I tell the farmers, if you refill in grass, you must go around once in two or three weeks with a long spade, and cut off every root of grass that is running through under this mulched place, then you will see some benefit from mulching, otherwise, but very little. It has a temporary effect only.

Mr. DAUBNER: I would say right here that I have experienced considerable difficulty in filling in an orchard with new trees. Not

Digitized by Google

from the process that the gentleman just spoke of, for I never leave my orchard seeded down for any length of time. In planting new trees where old trees died out, I have even drawn in fresh dirt, and I have been unsuccessful in raising trees, and I have mulched a good deal of it.

Mr. JOHNSON: You must mulch all the time, and if the ground is considerable dry, draw water.

Mr. DAUBNER: My orchard is an old orchard. If I don't plant some trees by and by, and they keep on dying out, I shall lose my orchard.

Mr. PLUMB: If one will dig up an oak grub and plant an apple-tree there it will thrive. The old apple-tree has exausted just what that young tree needs. I make this point, that I would rather plant a tree on a piece of new ground, that never had an apple-tree on it, dig up the grubs and cut off the bushes, and plant a tree there, than plant one on the grass sod if it is old land. Farmers say they cannot do that because they must have two years to get the rawness out of their land. My experience shows me that to go right into the woods where you get the original virgin soil, and give the trees the benefit of it, is better than old, exhausted soil. This is one reason why farmers have such poor success in filling up old orchards. There are materials that they don't supply. I recommend making a large hole, taking off the turf from a considerable surface, and chopping it up fine. The tree may start, and yet fail within sixty days, but you have the elements to keep you going the first year.

Mr. DAUBNER: I have had no trouble in getting a tree to start, and have it grow the first year, and the second, but after that they die out. I have come to the conclusion to plant the one hundred or two hundred trees that I have to set out in the spring, in an entirely new place.

Mr. CLARK: It is the general opinion among farmers that it is useless to plant our corn over, if some of it is dug up or fails. In our natural forests where we have the first growth of trees for instance, with large tops, and long roots, and the small trees that come up, the second growth are not thrifty. You go and cut down that first growth of large trees, and these little ones grow thrifty. My idea is the larger trees as well as the grass keep the little ones

Digitized by Google

down, the same as the nabobs of our country sometimes keep others down.

Mr. PEFFER: On the subject of resetting an old orchard, Mr. Daubner remarked about the loss of his trees after the second or third year. I think the trouble with his orchard is that the old roots were not all taken out; there were some of the old roots and bark from the old roots left, and there is a fungoid that has started on them, and probably produced their death.

Mr. DAUBNER: I generally aim to get that out.

Mr. JOHNSON: As regards this bark-bursting of apple-trees in the spring of the year, I think a great deal of that is caused by the over-growth of your apple-tree. Take, for instance, your prairie land, it will grow apple-trees very vigorously so that they will fail to mature sufficiently to stand our winters, and I think there is so much sap in the tree, that after freezing and thawing many times, it bursts. I never had any trouble with that except once in a while with a vigorous grower. Our land is white-oak openings, clay-land, consequently they don't grow so fast. On some other land, burr-oak openings for instance, my trees grow very fast. It is very difficult for me to keep the tops small enough; I cut the top off. I want more root to a tree than head.

There has been, among other questions for discussion, the one of "how shall we keep our boys at home on the farm?" I have raised four boys. My oldest boy, when he was six teen, took French leave. He thought I would go after him, and bring him back. I told him *no*. I have got more growing up, and when they get big enough, they will keep me running if I go after him. I made up my mind I wasn't going to run after any one. I got my boys to take an interest in the farm, some in hogs, some in chickens, some in geese, and some in ferrets; anything they want I always buy it for them, even if I pay out more than it is worth. I sent to England, and got a pair of ferrets; they cost me fourteen to sixteen dollars to get them here. The first year we raised some from them. We raised others and sold them, until I got my fourteen or fifteen dollars back. I says to the boys, here are the ferrets; I want you to take them. If any one of you leaves home, I want you to leave me just as many ferrets as you have now. The result was they made one hundred and fifty dollars out of those ferrits. I put them up a cider-mill which cost one hundred and

Digitized by Google

twenty dollars. I said, make me all the cider I want, and I will buy the apples, and what you make over and above what the mill cost is yours. They made from four to five dollars a day. They gave the money to their mother to put away. They gave her their rabbit-money, chicken-money, ferret-money, and cider-money. Their mother was their banker. When those boys wanted a pair of boots, or coat, they never came to me for a dollar. I sent to New York and got a pair of geese that cost me fourteen or fifteen dollars. The consequence was, I improved my geese. I took a goose on change that weighed eighteen pounds, and I could have sold it for fourteen cents a pound. The boys laid claim to all this money. The boys got it. It is all in the family. I have one boy that came home this winter. He has been to Iowa seeking his fortune. I asked him what he was going to do. He said he didn't know; he could not get anything to do. I went to town and bought three axes. I told him to go to work clearing off land, and I would give him twelve dollars a month for all the time he wanted to stay. My boys never want to go; it is the hardest thing to get them up to the village. Get your boys interested in ducks and geese, rabbits, stock of any kind, or anything else; get them to manifest an interest in taking care of something; get the boys interested, and when they want something to read, get them something to read. My boys take periodicals; the money don't come out of me. That is the way to keep them at home. If they want a horse and buggy, let them have a horse and buggy.

Mr. DAUBNER: I am acquainted with Mr. Johnson, and every word he says is exactly so. He owns nothing; his boys and family own it all. It is a wonder to me where he gets money to buy his glass of beer with.

Secretary Field offered the following resolutions.

*Resolved*, That the thanks of this Convention are due, and are hereby most cordially tendered to the railroads of the State, which have so generously and magnanimously extended reduced fare to the Convention.

*Resolved*, That we cordially extend our thanks to the press of the State for the gratuitous notices given of our Convention and of the proceedings, and especially we desire to thank the State Journal and Madison Democrat for the daily account of our proceedings given to their numerous readers.

The resolutions were unanimously adopted.

Secretary Field said, before the final adjournment, he desired



Digitized by Google

to congratulate those who had composed and participated in this convention, upon its success. Said it had been his pleasure for some years, to be connected with the State Agricultural Society, and with the annual conventions held under its auspices. He believed this was much the largest convention ever held in the State, showing an increasing interest among the industrial classes in these educational meetings, and he hoped this interest would continue to increase until every grange, club, and all other organizations for mutual benefit were fully represented. Said the Secretary: Many of you are representative men of some branch of industry in the State. Some of you have been sent here to represent an industrial society or association. If you have received any information of value, impart it to others, to the extent of your abilities and facilities for so doing. It is impossible for the great industrial masses to attend these gatherings. Hence they look to you and to me to furnish them all the information in our power.

It occurred to me, while listening to the remarks of a gentleman this afternoon, that some of the subjects discussed here would be appropriate topics to take up in the industrial organizations of the State. Delegates here could open the discussion, giving some of the views here advanced, as well as their own opinions, after which a general interchange of views could follow. Let mind rub against mind, brightening them for more useful work. Let each one give his views, backed by observation and practical experience, and in this way vast good can be accomplished. Mr. Daubner remarked this afternoon that there were men who came into this market frequently, living only a few miles out, who didn't know an agricultural convention was being held here. "'Tis true 'tis pity, pity 'tis 'tis true." I say to farmers of whom I purchase products, come to the office, to the rooms of the State Agricultural Society; and they innocently ask, where are they? I inform them, and some of them come, and accept a volume of our proceedings with thanks, after asking the price, and being told they are free, and that they have helped to pay for their publication. In working up these conventions, I have tried hard to have the different societies of the State send delegates here at their expense, thus making the burden more just and uniform among those directly interested. The delegates ought then to feel that the information obtained here should

Digitized by Google

be disseminated as widely as possible among those they represent. All are thus mutually benefited and improved.

I admire the growth and development of the plant in the field and the tree in the orchard or forest, but I admire still more, the growth and development of those engaged in the useful industries, for upon such must we look to advance the great material interests of the country. This growth and improvement can only advance by education, thought, and investigation. It has been well said here, that those engaged in the world's industries should think for themselves. A man is fit only to be a slave who allows others to do his thinking for him; consult however with others; obtain their views; compare them with yours, and, after obtaining all the information possible, let your own judgment be your guide, In every branch or department of labor, there is a continual struggle for existence. Go on to the streets of our cities, and you see men going hither and thither with lightning speed, and you sometimes wonder where they are going, and what is their occupation. I tell you, gentlemen, they are simply struggling for a livelihood; for an existence. One branch of business is trying to make all the profits it can, and if the gains in other equally useful enterprises are curtailed or lessened thereby, no one seems to care. In this struggle, those engaged in industrial, productive branches of labor must think and act for themselves, and see to it, that they obtain a full share of the profits of their industry.

At the close of Secretary Field's remarks, on motion, the convention adjourned *sine die.*

Digitized by Google

*Abstract of county*

| COUNTIES. | OFFICERS OF THE SOCIETY. | | |
|---|---|---|---|
| | Presidents. | Secretaries. | Treasurers. |
| Adams | J. M. Higbee | D. Seofield | A. F. Hill |
| Boscobel Ag. and Driving-Park Assoc'n | B. M. Coates | T. J. Brooks | T. Kronsage |
| Buffalo | F. Gilman | J. W. DeGraff | J. J. Senn |
| Baraboo Valley Agricultural Society | Jas. Lake | W. J. Canner | A.P.Ellenwood |
| Berlin Agricultural Association | D.L. Harkness | Jas. Yates | H. A. Peck |
| Clark | J. D. Gates | J. S. Dore | W.T.Hutchin'n |
| Columbia | L. W. Barden | L. H. Doyle | J. Q. Adams |
| Central Wis. Mech'l and Agricu'l Soc. | J. H. Sleeper | V. W. Seely | J. T. Moak |
| Columbus Union Agricultural Society | C. Ross | C. L. Duing | M. Adams |
| Crawford | L. A. Bonney | F. Mills | R. Wallin |
| Dane | M. Anderson | Geo. C. Russell | W.T.McConnell |
| Dodge | S. Eastman | J. B. Spencer | M. Lovel |
| Door | | C. A. Masse | G. Bassford |
| Fond du Lac | J. H. Martin | D. C. Lamb | H. G. Halsted |
| Grant | H. A. Moore | C. D. Shrader | W. W. Robe |
| Green | J. S. Smock | A. S. Douglas | J.H. Van Dyke |
| Iowa | J. Elwood | J. T. Pryor | Sam'l Hoskins |
| Jackson | E. W. Chase | E. E. LeClair | S. W. Bowman |
| Jefferson | C.Stoppenbach | G. J. Clapp | S. Brown |
| Juneau | I. H. Stewart | R. A. Wilkinson | M. Temple |
| Kenosha | H. Blackman | H. H. Tarbell | L. W. Thayer |
| Kewaunee | W. Seyk | R. L. Wing | |
| La Crosse | A. McMillans | J. B. Webb | F. W. Stiles |
| La Fayette | | J. Meehan | A. Richardson |
| Lodi Union Agricultural Society | R. Steele | E. W. Gardner | P. S. Kingsley |
| Manitowoc Central Ag. and Mech. Ass. | W. Carey | D. F. Robinson | S. A. Newell |
| Marathon | A. Kirkbusch | W. Wilson | D. L. Plumer |
| Marquette | Robert Page | W. H. Peters | W. Murphy |
| Monroe | C.E. Hanchett | W. H. Bigton | T. B. Tyler |
| Outagamie | John Dey | L. L. Randall | J. Goodland |
| Ozaukee | A. M. Alling | Chas. Wilke | W. Vogenitz |
| Pierce | J. A. Stirrat | H. A. Jay | T. J. Atwater |
| Portage | W.V. Fleming | A. J. Smith | W. Loing |
| Racine | N. D. Fratt | E. D. Perkins | W. E. Chipman |
| Richland | L. Akey | W. H. Pier | D. L. Downs |
| Ripon Agricultural Society | H. S. Town | T. Marshall | C. F. Wheeler |
| Rock | Geo. Sherman | R.J.Richardson | C. Miner |
| Sauk | H. H. Patten | J. M. True | H. Cowles |
| Shawano and Oconto | R. Gillett | M. Finnegan | C.S. MacKenzie |
| Sheboygan | J. F. Moore | J. E. Thomas | M.D. Hotchkiss |
| Sheboygan—German | Geo. Piefer | F. Stœsser | Carl Reich |
| Southwestern Industrial Association | R. D. Pulford | T. S. Ansley | T. Priestly |
| South'n Wisconsin and North'n Illinois Industrial Association | R. J. Burdge | M. S. Hinman | S. C. Moody |
| St. Croix | Geo. Martin | M. Herrick | A.D.Richardson |
| Trempealeau | J. Rhodes | C. E. Perkins | J. R. Ogden |
| Vernon | P. McIntyre | A. D. Chase | W.T.McConnell |
| Walworth | C. Martin | S. G. West | H. Latham |
| Washington | L. F. Frisbee | John Peck | F. Lorenz |
| Waukesha | W. A. Nickell | F. W. Montieth | J. Forbes |
| Waupaca | J. M. Baxter | F. W. Sackett | W. A. Springer |
| Waupaca Agricultural Association | C. Wright | A. J. Perkins | Myron Reed |
| Waushara | J. N. P. Bird | W. S. Monroe | S. M. Olds |

Digitized by Google

*agricultural societies for 1875.*

| PLACE AND DATE OF FAIRS. | | FINANCES. | | | |
|---|---|---|---|---|---|
| Place. | Time. | Receipts. | Expenses | Prem's. | Am't in treas'y. |
| | 1875. | | | | |
| Friendship | Oct. 5, 6 | $182 00 | $83 00 | $102 00 | $16 12 |
| Boscobel | Oct. 6-8 | 2,694 45 | 1,472 48 | 1,300 00 | ..... |
| Lincoln | Sept. 15-17 | 818 30 | 500 35 | 215 50 | 265 47 |
| Reedsburg | Sept. 23-25 | 902 75 | 402 75 | 540 00 | ..... |
| Berlin | Oct. 6-8 | 1,018 61 | 559 67 | 564 51 | 140 64 |
| Neillsville | Sept. 15-17 | 989 02 | 504 62 | 319 65 | 164 55 |
| Portage | Sept. 28-30 | 1,187 11 | 344 65 | 744 00 | 567 61 |
| Watertown | Sept. 17-24 | 3,698 45 | 3,243 65 | 2,454 80 | ..... |
| Columbus | Oct. 6-8 | 1,587 50 | 693 50 | 894 00 | 266 84 |
| Seneca | Sept. 29, 30 | 718 80 | 793 94 | 187 00 | ..... |
| Madison | Sept. 21-34 | 3,382 53 | 1,585 94 | 2,221 77 | 60 60 |
| Beaver Dam | Sept. 14-16 | 141 25 | 91 25 | 50 00 | ..... |
| Sturgeon Bay | Sept. 24, 25 | 226 39 | 98 39 | 128 00 | 15 74 |
| Fond du Lac | Sept. 21-24 | 3,123 05 | 1,734 05 | 1,489 00 | 48 40 |
| Lancaster | Sept. 1-3 | 1,301 70 | 393 51 | 901 25 | 6 94 |
| Monroe | Sept. 15-18 | 4,640 00 | 3,537 32 | 1,191 03 | 11 65 |
| Dodgeville | Sept. 29 Oct. 2 | 1,937 20 | 742 44 | 1,050 25 | 144 51 |
| Black River Falls | Sept. 28-30 | 1,058 30 | 482 85 | 589 90 | ..... |
| Jefferson | Sept. 15, 16 | 2,077 65 | 1,185 00 | 875 00 | 17 65 |
| Mauston | Sept. 22-24 | 879 60 | 388 92 | 529 50 | 33 79 |
| Kenosha | Sept. 21-23 | 3,810 56 | 2,340 56 | 1,470 00 | ..... |
| Kewaunee | Sept. 24-26 | 256 44 | 202 94 | 53 50 | ..... |
| La Crosse | Sept. 15-17 | 1,485 05 | 457 15 | 676 25 | 351 65 |
| Darlington | Sept. 15-19 | 2,058 97 | 1,878 45 | 266 10 | 42 27 |
| Lodi | Sept. 14-17 | 1,402 76 | 1,098 86 | 507 00 | 78 19 |
| Clark's Mills | Sept. 23-25 | 504 25 | 298 72 | 264 50 | ..... |
| Marathon | Sept. 17, 18 | 511 77 | 176 14 | 355 85 | 73 38 |
| Oxford | Sept. 29, 30 | 202 05 | 72 60 | 128 25 | 1 20 |
| Sparta | Sept. 21-23 | 1,734 08 | 596 81 | 1,053 45 | 83 82 |
| Appleton | Sept. 22-24 | 977 25 | 374 20 | 585 15 | 17 90 |
| Cedarburg | Oct. 6, 7 | 476 49 | 288 74 | 207 75 | 86 95 |
| Prescott | Sept. 29 Oct. 1 | 299 70 | 100 68 | 162 50 | 49 97 |
| Amherst | Sept. 21-23 | 514 25 | 119 10 | 395 15 | ..... |
| Burlington | Sept. 13-15 | 3,575 70 | 1,578 42 | 2,082 91 | ..... |
| Richland Center | Sept. 22-24 | 981 60 | 515 59 | 343 75 | 123 22 |
| Ripon | Sept. 14-17 | 2,545 33 | 1,133 68 | 1,267 50 | 230 22 |
| Janesville | Oct. 5-9 | 3,249 51 | 1,483 88 | 1,765 63 | ..... |
| Baraboo | Oct. 6-8 | 2,138 00 | 1,579 76 | 558 24 | ..... |
| Oconto | Sept. 14-16 | 324 32 | 254 93 | 65 00 | 4 39 |
| Sheboygan Falls | Sept. 15-17 | 642 95 | 334 78 | 510 00 | ..... |
| Sheboygan | Sept. 28-30 | 896 03 | 712 68 | 238 61 | 54 66 |
| Mineral Point | Aug. 31 Sept. 3 | 4,133 98 | 1,296 30 | 2,016 70 | 820 98 |
| Beloit | Sept. 14-16 | 2,270 91 | 2,010 13 | ..... | 260 78 |
| Richmond | Sept. 21-23 | 826 55 | 285 80 | 540 75 | 169 40 |
| Galesville | Sept. 22-24 | 582 00 | 307 50 | 274 50 | 4 70 |
| Viroqua | Sept. 29 Oct. 1 | 859 00 | 545 50 | 303 50 | 768 49 |
| Elkhorn | Sept. 28 Oct. 1 | 4,936 13 | 2,819 13 | 2,117 00 | 680 13 |
| West Bend | Sept. 21-23 | 552 75 | 379 08 | 202 25 | ..... |
| Waukesha | Oct. 6-8 | 2,226 58 | 1,398 48 | 828 10 | 54 64 |
| Weyauwega | Oct. 7-9 | 1,332 73 | 1,039 48 | 293 25 | ..... |
| Waupaca | Sept. 14-16 | 1,025 22 | 895 16 | 130 06 | ..... |
| Wautoma | Sept. 30 | 317 55 | 247 55 | 70 00 | 118 91 |

Digitized by Google

# University Farm.

## EXPERIMENTS.

[Extracts from the report of Professor W. W. Daniells to the board of regents of the University of Wisconsin, for 1875.]

### WINTER WHEAT.

*Diehl.*—Sown September 4, 1874, by hand; 1¾ bushels of seed per acre, weighing 56 lbs. per bushel. Harvested, July 14, 1875. Weight of straw and grain per acre, 2,188 lbs.; weight of grain, 832 lbs.—13.52 bushels; weight per bushel, 59 lbs. Percentage of grain, to weight of straw and grain, 38.

*Prussian.*—Sown September 10, 1874, by hand; 1¾ bushels seed per acre, weighing 55 lbs., per bushel. Harvested July 19, 1875. Weight of straw and grain per acre, 3,670 lbs.; weight of grain, 726 lbs.—12.6 bushels; weight per bushel, 59 lbs. Percentage of grain to weight of straw and grain, 19.8.

*Fultz.*—Sown by hand September 5, 1874, 1¾ bushels seed per acre, weighing 61 lbs. per bushel. Harvested July 13, 1876. Weight of straw and grain per acre, 2,676 lbs.; weight of grain, 1,046 lbs.—17.26 bushels; weight per bushel, 62 lbs. Percentage of grain to weight of straw and grain, 39.

These varieties of winter wheat, in common with all small-grain in cultivation, were very badly injured by the chinch-bug. On this account no reliance can be placed upon either the absolute or relative yield of the different varieties. A field of Fultz wheat, upon the hospital farm, across Lake Mendota, not affected by chinch-bugs, yielded over 33 bushels per acre. The yield upon the university farm for the three years previous averaged 29½ bushels. I am confirmed in the opinion that this is a most valuable variety of winter wheat for Wisconsin, both on account of its productiveness and its apparent hardiness.

Digitized by Google

SPRING WHEAT.

The following varieties were sown by hand April 24, to two bushels of seed per acre:

*Red Mammoth Spring.*—Weight of seed per bushel, 56.6 lbs. Harvested July 30. Weight of straw and grain per acre, 4,360 lbs.; weight of grain 1,251 lbs.—22 bushels 51 lbs.; one bushel weighed 56 pounds. Percentage of grain to weight of straw and grain, 28.9.

*White Michigan.*—Weight of seed per bushel, 55 lbs. Harvested July 26. Weight of straw and grain per acre, 4,707 lbs.; weight of grain 1,186 lbs.—19 bushels 46 lbs.; one bushel weighed 56½ lbs. Percentage of grain to weight of straw and grain, 25.2.

*Oran.*—Weight of seed per bushel, 56 lbs. Harvested July 28. Weight of straw and grain per acre, 4,297 lbs.; weight of grain, 786 lbs.—13 bushels 6 lbs. Percentage of grain to weight of straw and grain, 18.3.

*Odessa.*—Weight of seed per bushel, 56.6 lbs. Harvested August 5. Weight of straw and grain per acre, 4,672 lbs.; weight of grain, 1,125 lbs.—18 bushels, 45 lbs. Percentage of grain to weight of grain, 24.1.

*German Fife.*—One bushel and twenty-nine quarts of seed per acre, weighing 61 lbs. per bushel. Harvested July 31. Weight of straw and grain per acre, 4,100 lbs.; weight of grain 1,198 lbs.—19 bushels; 58 lbs.; one bushel weighed 56 lbs. Percentage of grain to weight of straw and grain, 29.2.

The following varieties were sown April 24.

*April.*—Weight of seed per bushel 48 lbs. Harvested July 31. Weight of straw and grain per acre, 4,618 lbs.; weight of grain, 1,114 lbs.—18 bushels, 34 lbs.; one bushel weighed 55 lbs. Percentage of grain to weight of straw and grain, 24.6.

*Arnautka.*—One and three-quarter bushels of seed per acre, weighing 58¼ lbs. per bushel. Harvested July 26. Weight of straw and grain per acre, 5,760 lbs.; weight of grain, 1,278 lbs.—21 bushels, 18 lbs. Percentage of grain to weight of straw and grain, 22.3.

*Bismark.*—Weight of seed per bushel, 46.2 lbs. Harvested August 19. Weight of straw and grain per acre, 4,113 lbs; weight of grain, 1,175 lbs.—17 bushels, 32 lbs; one bushel weighed 55 lbs. Percentage of grain to weight of straw and grain, 28.5.

Digitized by Google

*Chamberlin.*—From 9 pounds of this variety, 145 pounds were raised weighing 58 pounds per bushel.

This wheat was all very seriously injured by the chinch-bug.

### BARLEY.

The following varieties were sown April 24, two bushels of seed per acre being used. They were all injured by the chinch-bug.

*Saxonian.*—Weight of seed per bushel, 44 lbs. Harvested July 24. Weight of straw and grain per acre, 5,581 lbs; weight of grain, 2,205 lbs.—45 bushels, 45 lbs.; weight of one bushel, 49 lbs. Percentage of grain to weight of straw and grain, 39.4.

*Common,* (Scotch.)—Weight of seed per bushel, 42 lbs. Harvested July 24. Weight of straw and grain per acre, 5,332 lbs.; weight of grain, 2,129 lbs.—44 bushels, 17 lbs.; weight per bushel, 48 lbs. Percentage of grain to weight of straw and grain, 40.3.

*Manshury.*—Weight of seed per bushel, 45 1-5 lbs. Harvested July 23. Weight of straw and grain per acre, 6,090 lbs.; weight of grain, 2,905 lbs.—60 bushels, 25 lbs.; weight per bushel 49, lbs. Percentage of grain to weight of straw and grain, 47.7.

### OATS.

Sown April 26, by hand, to 2½ bushels of seed per acre. All varieties were injured by the chinch-bug, and were badly lodged.

*Somerset.*—Weight of seed per bushel, 28 lbs. Harvested July 26. Weight of straw and grain per acre, 7,420 lbs.; weight of grain, 2,283 lbs.—71 bushels, 11 lbs.; weight per bushel, 37 lbs. Percentage of grain to weight of straw and grain, 30.7.

*Bohemian.*—Weight of seed per bushel, 32 lbs. Harvested July 16. Weight of straw and grain per acre, 6,608 lbs.; weight of grain, 1,879 lbs.—58 bushels and 23 lbs.; weight per bushel; 31.4 lbs. Percentage of grain to weight of straw and grain, 28.4.

*Houghton.*—Weight of seed per bushel, 28.8 lbs. Harvested July 29. Weight of straw and grain per acre, 7,092 lbs.: weight of grain 2,154 lbs.—67 bushels 10 lbs.; weight per bushel, 33 lbs. Percentage of grain to weight of straw and grain, 30.3.

*White Schonen.*—Weight of seed per bushel, 29 lbs. Harvested July 29. Weight of straw and grain, 7,676 lbs.; weight of grain, 3,042 lbs.—95 bushels, 2 lbs. Percentage of grain to weight of straw and grain, 39.5.

Digitized by Google

The following were sown April 27, both being new varieties:

*Early Fellow.*—Weight of seed per bushel, 45 lbs. Harvested August 2. Weight of straw and grain per acre, 7,286 lbs.; weight of grain 1,421 lbs.—44.15 bushels; weight per bushel 34 lbs. Percentage of grain to weight of straw and grain, 19.5.

*Canada.*—Weight of seed, per bushel 45 lbs. Harvested July 31. Weight of straw and grain 7,153 lbs.; weight of grain, 1,866 lbs.—58.3 bushels; weight per bushel, 31 lbs. Percentage of grain to weight of straw and grain, 26.5.

CORN.

The following four standard field varieties were planted upon adjacent plats, May 18. The cultivation of all was the same, excepting that the White Australian, being a smaller variety was planted in hills 3½ x 4 feet, the other varieties 4 x 4 feet, four kernels to the hill.

*White Australian.*—Harvested September 16. Yield per acre, 60⅛ bushels ears, of 75 pounds each.

*Cherokee.*—Harvested September 17. Not quite mature. Yield per acre, 51 bushels ears, of 71 pounds each.

*Yellow Dent.*—Harvested September 17, to prevent injury by frost. Not quite mature. Yield per acre, 54⅛ bushels ears, of 75 pounds each.

*Early Yellow Dent.*—Harvested September 17. Yield per acre, 53⅛ bushels ears, of 75 pounds each.

The following table contains the yield of these varieties in bushels of ears of 75 pounds each, since they have been in cultivation upon the University Farm:

| Variety. | 1871. | 1872. | 1873. | 1874. | 1875. |
|---|---|---|---|---|---|
| Early Yellow Dent | 46.6 | 52.1 | 58.6 | 59.4 | 53.3 |
| White Australian | 72.5 | 60.7 | 63.2 | *59.2 | 60.3 |
| Cherokee | 56.5 | 51.9 | 52.7 | 63.1 | 51. |
| Yellow Dent | ..... | ..... | 49.4 | 58.4 | 54.3 |

* Injured by chinch-bugs.

To enable us to estimate the amount of corn, cob, and moisture, in each variety, 300 pounds of each were, at the time of husking, placed upon a scaffold in the barn, where they were subjected to

Digitized by Google

the drying action of the atmosphere, until February 16, 1875. They were then weighed, shelled, and the cobs weighed. The result is given in the following table:

| VARIETY. | Each 100 lbs. weighed in October, gave in February— | | |
|---|---|---|---|
| | Lbs. corn. | Lbs. cob. | Lbs. loss, (moisture.) |
| Early Yellow Dent | 77 1/12 | 14 3/4 | 7 1/3 |
| White Australian | 61 | 14 3/4 | 24 1/4 |
| Cherokee | 64 5/8 | 13 1/8 | 22 |
| Yellow Dent | 77 7/12 | 11 1/12 | 10 7/12 |

POTATOES.

The following varieties have been in cultivation for the first time from small quantities of seed. The quality has not been tested:

*Alpha.*—Ripe August 16.

*Sutton's Red-skin Flower-ball.*—Ripe October 1.

*Acme.*—Killed by frost October 12.

*Eureka.*—Ripe September 8.

*Nonsuch.*—Ripe September 1.

*Hundred-Fold.*—Killed by frost October 12.

The table below gives the time of ripening and yield per acre of the other varieties in cultivation, all of which were planted May 10, in rows 4 feet apart, hills 2 feet apart in rows.

| VARIETY. | Bushels per acre. | Time of ripening. | Quality. |
|---|---|---|---|
| Early Rose | 93 | Aug. 13 | Excellent. |
| Early Favorite | 95 3/4 | Aug. 10 | Excellent. |
| Snow-Flake | 169 | Aug. 30 | Excellent. |
| Extra Early Vermont | 145 1/3 | Aug. 27 | Excellent. |
| Brownell's Beauty | 177 1/2 | Oct. 1 | Excellent. |
| Compton's Surprise | 119 | Sept. 3 | Good. |
| Peachblow | 111 2/3 | Sept. 29 | Excellent. |

Digitized by Google

The Snow-Flake and Brownell's Beauty were first raised last year. They promise to be very valuable varieties in all respects They yield well, are fine looking, and are second to no potatoe in quality.

IMPROVEMENT OF SOILS BY MECHANICAL MEANS.

This experiment was begun in 1871, upon four adjacent plats of an acre each, to be cultivated as follows:

Plat 1, to be plowed to a depth of five inches only.

Plat 2, to be plowed twelve inches deep.

Plat 3, to be plowed twenty inches deep by trench-plowing.

Plat 4, to be plowed twenty inches deep by subsoiling.

Plats 1 and 2 have been cultivated in the prescribed manner from the beginning.

Plat 3, in 1871, was plowed twelve inches deep only; in 1872 and 1873, seventeen inches; in 1874 and 1875, eighteen inches, which is as deep as it has been found practicable to plow.

Plat 4 was subsoiled sixteen inches deep in 1871; seventeen inches in 1872 and 1873, and eighteen inches in 1874 and 1875.

The cultivation of these plats has been the same in all other respects than those mentioned.

The soil is clay, with heavy clay-subsoil; the land is level and rather low. In the fall of 1873, an underground drain was laid through each of the plats, to carry away water that formerly flowed over them all, after heavy rains.

During the first four years these plats were in cultivation to corn exclusively. The past season a portion has been in cultivation to corn and a portion to oats. The following table gives the yield per acre for the respective years, the corn being in bushels of ears, weighing 75 pounds each:

| METHOD OF CULTIVATION. | 1871. | 1872. | 1873. | 1874. | 1875. | |
|---|---|---|---|---|---|---|
| | | | | | Corn. | Oats. |
| Plowed 5 inches deep | 55.4 | 43.5 | 53.4 | 53 | 67.7 | 60.2 |
| Plowed 12 inches deep | 50.6 | 50.3 | 52.8 | 58.1 | 67 | 65.5 |
| Trench-plowed 18 inches deep | 44.9 | 54.7 | 51.3 | 65.3 | 60.5 | 65.1 |
| Subsoiled 18 inches deep | 42.2 | 56.8 | 51.1 | 60.8 | 57.2 | 64 |

The yield of plats 3 and 4 was considerably diminished by the chinch-bug, plat 4 being the more injured. How great was the

Digitized by Google

injury, would of course be impossible to say. But lying adjacent to plat 4, on the side opposite plat 3, was an acre that has always been plowed about seven inches deep, and which otherwise has had the same culture as the above plats. It was more badly injured by chinch-bugs than plat 4, and yielded this season at the following rates per acre:

Corn, 55 bushels.

Oats, 45 bushels; which is much less than any of the above plats in experiment, and shows that the difference in yield cannot be attributed to depth of culture alone.

The Department of Agriculture has received the following donations during the year:

From the Commissioner of Agriculture:

Ten quarts Arnautka wheat.

Sixteen quarts Clawson winter wheat.

Twelve quarts Canada oats.

Twelve quarts Summerset oats.

Eight quarts white-winter rye.

Four pounds mangel-wurzel seeds.

Four pounds sugar-beet seed.

Various vegetable seeds.

From the same, through Hon. W. W. Field, Secretary Wisconsin State Agricultural Society:

Ten quarts Arnautka wheat.

Twelve quarts Canada oats.

From W. W. Collins, Esq., winter-rose potatoes.

From G. P. Peffer, Esq., Pewaukee, twelve apple-trees.

Digitized by Google

*Summary of the meterological observations, for the year ending October 31, 1875.*

| MONTH. | THERMOMETER EXPOSED IN OPEN AIR. | | | | BAROMETER, HEIGHT REDUCED TO 32°. | | | | Inches of rain and melted snow. | Amount of cloudiness. | Percentage of saturation. | PERCENTAGE OF WINDS. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max. | Min. | Mean. | Variation. | Max. | Min. | Mean. | Fluctuation. | | | | S. | SW. | W. | NW | N. | NE. | E. | SE. |
| November ... | 69 | 3 | 32.6 | 72 | 29.501 | 28.104 | 28.970 | 1.397 | 3.29 | 4.4 | 77 | 12 | 15 | 30 | 28 | 4 | 0 | 2 | 9 |
| December .... | 50 | 15 | 22.6 | 65 | 29.598 | 28.467 | 28.977 | 1.131 | .45 | 5.9 | 84 | 19 | 20 | 20 | 34 | 7 | 0 | 0. | 0 |
| January ..... | 33 | 25 | 3.6 | 58 | 29.439 | 28.618 | 29.073 | .821 | .90 | 4.8 | 97 | 13 | 17 | 40 | 16 | 2 | 2 | 5 | 5 |
| February ..... | 27 | 21 | 3.4 | 48 | 29.569 | 28.387 | 28.655 | 1.212 | 2.80 | 4.3 | 83 | 10 | 16 | 42 | 5 | 11 | 5 | 7 | 4 |
| March ..... | 64 | 1 | 25.1 | 65 | 29.291 | 28.050 | 28.826 | 1.261 | .90 | 4.4 | 70 | 10 | 7 | 31 | 3 | 17 | 15 | 3 | 14 |
| April ..... | 62 | 11 | 43.3 | 51 | 29.196 | 28.182 | 28.882 | 1.014 | 1.87 | 5.1 | 68 | 4 | 22 | 10 | 26 | 7 | 18 | 6 | 7 |
| May ..... | 83 | 31 | 59.0 | 52 | 29.443 | 28.137 | 26.858 | 1.306 | 2.61 | 4.0 | 58 | 12 | 21 | 4 | 13 | 14 | 10 | 10 | 16 |
| June ..... | 80 | 51 | 64.1 | 29 | 29.173 | 28.564 | 28.793 | .609 | 3.37 | 4.8 | 75 | 19 | 13 | 12 | 15 | 9 | 2 | 6 | 24 |
| July ..... | 86 | 62 | 73.0 | 24 | 29.238 | 28.622 | 28.955 | .616 | .97 | 3.8 | 71 | 13 | 19 | 17 | 8 | 8 | 8 | 4 | 23 |
| August..... | 86 | 52 | 69.6 | 34 | 29.440 | 28.626 | 28.947 | .814 | 2.57 | 3.2 | 71 | 30 | 11 | 0 | 28 | 1 | 16 | 6 | 8 |
| September ... | 81 | 36 | 58.9 | 45 | 29.374 | 28.525 | 29.009 | .849 | 2.06 | 5.6 | 66 | 25 | 20 | 9 | 17 | 15 | 6 | 0 | 8 |
| October ..... | 77 | 27 | 46.1 | 50 | 29.344 | 28.380 | 28.930 | .964 | 1.96 | 6.3 | 63 | 10 | 32 | 10 | 29 | 10 | 6 | 2 | 1 |
| Sums .... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 23.75 | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Means ... | ..... | ..... | 41.8 | ..... | ..... | ..... | 28.931 | ..... | ..... | ..... | 74 | 14 | 18 | 19 | 19 | 9 | 7 | 4 | 10 |

Digitized by Google

## POTATOE-CULTURE.

BY H. H. HOWLETT, BARABOO.

By request, I give to the public the result of my labor during the past season, in the cultivation of this valuable esculent.

The soil selected for my potatoe-field is what is known as heavy timber-land or clay-loam, having been cleared and under cultivation for the past twelve years. Last spring I cleared the field of corn-stubble, and applied ten loads of well-rotted barn-yard manure per acre, which I turned under, plowing about nine inches deep; harrowed well and then used a clod-crusher, which left the field smooth and mellow. I then marked my rows two by four feet, and cut tubers to single eyes; rolled them in land-plaster, planting about four inches deep, two eyes in each hill. I have kept a record of the number of eyes planted of each variety; also weighed the product soon after they were dug. Have allowed sixty pounds per bushel, and 5,444 hills to the acre. Planted all varieties May 15 to 18, with the exception of Alpha, Eureka, and Acme, which were planted June 10. Made two applications of Paris-green and land-plaster; one part of the former to thirty parts of the latter, which saved the crops from being destroyed by the Colorado beetle. Cultivated deep and clean, using the double-shovel plow three times; hoed twice; hilled at last hoeing.

*Table showing average yield of different varieties.*

| Name of variety. | Number of eyes. | Number of hills. | Average yield per hill. | Total yield. | Rate per acre. | Quality. |
|---|---|---|---|---|---|---|
| | | | *Lbs.* | *Lbs.* | *Bus.* | |
| Early Goodrich | 108 | 54 | 1 1-6 | 90 | 105 | Poor. |
| Rose | 144 | 72 | 2 61-72 | 205 | 153 | Excellent. |
| June | 80 | 40 | 1⅛ | 45 | 102 | Poor. |
| Monsees | 140 | 70 | 3 26-35 | 262 | 338 | Good. |
| No-blow | 92 | 46 | 2 | 92 | 181 | Good. |
| Extra Early Vermont | 110 | 55 | 3 19-55 | 184 | 274 | Excellent. |
| Favorite | 128 | 64 | 2 61-64 | 169 | 266 | Excellent. |
| Alpha, ½ pound | 68 | 34 | 2 | 68 | 181 | Excellent. |
| Snowflake, 1 pound | 66 | 33 | 5 28-33 | 193 | 530 | Excellent. |
| Eureka, ½ pound | 74 | 47 | 2 34-37 | 108 | 258 | Excellent. |
| Brownell's Nonesuch | 144 | 72 | 2 34-35 | 210 | 269 | Excellent. |
| Brownell's Beauty | 94 | 47 | 4 23-47 | 191 | 365 | Good. |

Digitized by Google

*Table showing average yield, etc.*—Continued.

| Name of variety. | Number of eyes. | Number of hills. | Average yield per hill. | Total yield. | Rate per acre. | Quality. |
|---|---|---|---|---|---|---|
| | | | *Lbs.* | *Lbs.* | *Bus.* | |
| King of the Earlies | 380 | 190 | 1 91-95 | 372 | 172 | Good. |
| Excelsior | 110 | 55 | 2⅔ | 144 | 241 | Good. |
| Peachblow, (Jersey) | 300 | 150 | 5 1-5 | 780 | 471 | Poor. |
| Late Rose | 74 | 37 | 4 34-37 | 182 | 482 | Good. |
| Pink-Eye, (round) | 22 | 11 | 4 | 44 | 362 | Good. |
| Lady-Finger | 84 | 42 | 31-42 | 31 | 66 | Medium. |
| Garnet, Chili | 160 | 80 | 17-20 | 68 | 77 | Medium. |
| Bread | 100 | 50 | 50-97 | 97 | 46 | Excellent. |
| Scotch Russet | 200 | 100 | 1 23-100 | 123 | 108 | Medium. |
| Farmers' Friend | 30 | 15 | 2 1-15 | 31 | 187 | Medium. |
| Plum-Blow | 32 | 16 | 2⅜ | 38 | 215 | Medium. |
| Carpenter's Seedling | 184 | 92 | 3 37-72 | 253 | 396 | Medium. |
| Red Carter | 114 | 57 | 2 20-57 | 134 | 213 | Excellent. |
| Concord | 178 | 89 | 2 5-89 | 194 | 186 | Good. |
| King of Jacksons | 102 | 51 | 4 47-51 | 251 | 446 | Good. |
| Compton's Surprise | 144 | 72 | 2 ¾ | 179 | 249 | Excellent. |
| Ice Cream | 118 | 59 | 54-59 | 54 | 83 | Good. |
| White Rose | 110 | 55 | 8-11 | 40 | 78 | Worthless. |
| Blue Peerless | 20 | 10 | 3 1-5 | 33 | 290 | Excellent. |
| Boyer | 74 | 37 | 1 9-37 | 46 | 135 | Poor. |
| Red Jacket | 130 | 65 | 3 61-65 | 256 | 348 | Poor. |
| Mountain Russet | 50 | 25 | 2 3-5 | 130 | 235 | Poor. |
| California | 44 | 22 | 8 5-11 | 186 | 767 | Stock only. |
| Davis' Seedling | 80 | 40 | 3 | 120 | 272 | Medium. |
| Jenny Lind | 14 | 7 | 2 1-7 | 15 | 197 | Poor. |
| Silver Skin | 16 | 8 | 1 ¾ | 14 | 158 | Excellent. |
| Borne | 18 | 9 | 1 ⅔ | 15 | 150 | Medium. |
| Acme, ½ pound | 42 | 21 | 1 ½ | 28 | 122 | Excellent. |
| Badger Seedling | 224 | 112 | 4 17-56 | 482 | 392 | Excellent. |
| Ronoake | 40 | 20 | 1 19-20 | 39 | 166 | Worthless. |
| Non-list, No. 1 | 28 | 14 | 1 3-7 | 20 | 127 | Good. |
| No. 2 | 154 | 77 | 1 45-47 | 122 | 177 | Excellent. |
| No. 3 | 44 | 22 | 1 5-22 | 37 | 152 | Medium. |
| No. 4 | 16 | 8 | 2 ½ | 20 | 223 | Worthless. |
| Scotch Fluke | 16 | 8 | 1 1-7 | 8 | 151 | Excellent. |

## APPLE-TREES.

BY G. J. KELLOGG, JANESVILLE.

I herewith send you a list of varieties of apples from eighteen fruit-growers of the State, and from various locations, embracing

Digitized by Google

twelve counties of Wisconsin. They are the most profitable varieties of apples in each location named, and in the order of value, as indicated by the figures of these successful cultivators; the number of kinds by each, not exceeding ten, and for the past ten to twenty years.

It will be seen by these lists that nearly all have a majority of the best five varieties that have so long been recommended by our State Horticultural Society, for general cultivation. The great difference of soils and locations throughout the State, are so varied that it is found not advisable to recommend a list of apples, or other fruits for general planting, advising at our last horticultural meeting planters to look about them and cultivate those varieties that that are paying best in their own locality. You will see by the following number of kinds, that it requires forty varieties of apples to make up this list of eighteen, and none of them over ten each. We have obtained these lists as those varieties that have paid best without regard to hardiness or recommendations. Some of the new varieties are not in most of the lists, as they have not been long enough planted to test them.

Digitized by Google

*Table showing value for profit, estimated by fruit-growers, of different varieties of apples.*

| VARIETY. | A. J. Phillips. | J. W. Emmons. | J. M. Smith. | E. Wilcox. | H. Floyd. | E. L. Hatch. | Chas. Hirschinger. | A. G. Tuttle. | Wm. Finlayson. | N. N. Palmer. | H. Steinfort. | C. H. Greenman. | J. C. Plumb. | Geo. J. Kellogg. | B. B. Olds. | Geo. P. Peffer. | H. M. Thompson. | J. S. Stickney. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fameuse | 2 | 3 | 1 | 4 | 4 | 2 | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 1 | 5 | 1 | 7 | 6 |
| Red Astrachan | 6 | 8 | .... | .... | .... | .... | .... | 8 | 2 | .... | .... | .... | 10 | 5 | 2 | 10 | 2 | .... |
| Duchess | 1 | 7 | .... | 1 | 1 | 1 | 4 | 4 | 1 | 5 | 6 | .... | 8 | 4 | 3 | 3 | .... | 10 |
| Tolman Sweet | 3 | 5 | 2 | .... | 5 | 8 | .... | 10 | .... | 7 | 10 | .... | .... | 10 | .... | 8 | .... | 2 |
| Golden Russet | 5 | 4 | .... | .... | 8 | 3 | .... | .... | .... | 4 | 5 | 2 | .... | 6 | 1 | 7 | 9 | 3 |
| Utters | .... | .... | .... | 3 | 3 | 7 | 3 | 3 | 6 | .... | .... | .... | 4 | .... | .... | .... | .... | .... |
| Plumb's Cider | .... | .... | .... | 2 | 7 | 9 | 7 | 5 | .... | .... | .... | .... | 6 | .... | .... | .... | .... | .... |
| Seek no Further | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 | .... | .... | .... | .... | 5 | .... | 7 |
| Willow Twig | .... | .... | .... | .... | .... | .... | .... | .... | 9 | 2 | .... | .... | 3 | .... | .... | .... | .... | .... |
| Ben Davis | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 2 | .... | 10 | .... | .... | .... |
| St. Lawrence | .... | .... | .... | .... | .... | .... | .... | 9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Haas | .... | .... | .... | .... | .... | 5 | 2 | .... | 4 | 6 | .... | .... | .... | 2 | .... | .... | .... | .... |
| Alexander | 4 | .... | 3 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 2 | 3 | .... |
| Fall Stripe | .... | .... | .... | .... | .... | .... | 5 | .... | 8 | 8 | 8 | .... | .... | .... | .... | .... | .... | .... |
| Red Gilliflower, Bethlemite | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 10 | .... |
| Rawel's Janet | .... | 1 | .... | .... | .... | .... | .... | .... | 10 | 9 | .... | .... | .... | .... | 9 | .... | .... | .... |
| Fall Spitzenberg | .... | .... | .... | .... | .... | 5 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Sops of Wine | .... | .... | .... | .... | .... | .... | .... | .... | 5 | .... | .... | .... | 9 | 3 | .... | .... | .... | 1 |
| Nod-head | .... | .... | .... | .... | 6 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Walbridge | .... | .... | .... | .... | .... | 4 | .... | 2 | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... |
| McMayhan's White | .... | .... | .... | .... | .... | 6 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Pewaukee | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 | .... | .... | 4 | .... | .... |
| Lowell | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 9 | .... | .... | .... | .... |
| Fall Orange | .... | .... | .... | .... | 2 | .... | .... | 6 | .... | .... | .... | 4 | .... | .... | 6 | 6 | .... | 8 |
| Victuals and Drink | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 | .... | .... | .... |
| Northern Spy | .... | 9 | .... | .... | .... | .... | .... | .... | .... | .... | 4 | 5 | .... | .... | .... | .... | .... | 9 |
| Colvert | .... | .... | .... | .... | .... | .... | 10 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 5 | 4 |
| Fall Wine Sap | .... | .... | .... | .... | .... | .... | .... | .... | 7 | .... | 9 | 3 | .... | .... | .... | .... | .... | .... |
| Winter Wine Sap | .... | .... | .... | .... | .... | .... | .... | .... | .... | 10 | .... | .... | .... | .... | .... | .... | .... | .... |
| Red Romanite | .... | 6 | .... | .... | .... | .... | .... | .... | .... | 3 | .... | .... | .... | .... | .... | .... | .... | .... |
| Weaver's Sweet | .... | .... | .... | .... | .... | .... | 6 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 6 | 5 |
| Fall Janet | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 4 | .... |
| Autumn Strawberry | .... | .... | .... | .... | .... | .... | 8 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Perry Russet | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 8 | .... |
| Hulburt | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 4 | .... | .... | .... |
| Kirkbridge White | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 | .... | .... | .... | .... |
| Keswick Codlin | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 8 | .... | .... | .... | .... |
| Domine | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 2 | .... | .... | .... | .... | .... | .... | .... |
| Paridise Winter Sweet | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 3 | .... | .... | .... | .... | .... | .... | .... |
| Jonathan | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 8 | 9 | .... | .... |
| Sour Bough | .... | .... | .... | .... | .... | .... | 9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... |



Digitized by Google

## REPORT OF THE FISH COMMISSIONERS.

*To His Excellency the Governor and the Legislature of Wisconsin:*

GENTLEMEN:—The Commissioners of Fisheries of the State of Wisconsin, appointed in pursuance of a law of this State, have the honor to submit this, their second annual report, for the past current year. The law does not make it a part of our duty to make the report, but we deem it proper to acquaint you with our proceedings under our commission, so that you may be fully advised as to what we are doing with the funds placed at our disposal. In case the commission should be continued, as it no doubt will be under some form, we think that it should be placed upon the same footing with the other institutions of the State, and the Commissioners be required to make an annual report for the fiscal year ending 30th of September, in each year. This would secure uniformity in accounts, and the printing of transactions to be placed in the hands of the legislature at the commencement of the session. Now, we are dependent upon the action of the legislature in the nature of a joint resolution to get our report printed, and last winter, weeks elapsed before we had a hearing upon it.

We are happy to say that the public mind is fast becoming educated on the subject under consideration. Newspapers and standard periodicals devote much of their valuable space in giving information on this subject. We should have been glad, in this report, to have given complete statistics as to the extent of the fish-interest in Wisconsin, but the compiling of complete information on that subject would require much labor and time, and we have not felt at liberty, from the small appropriation in our hands, to incur the necessary expense. This should be done without unnecessary delay, and as one of our Commissioners, (Dr. Hoy,) in the opinion of his associates, is peculiarly fitted for that task, we hope it may be done sometime during the coming season. We give such information on the subject as we have been able to obtain, and the extent of the fisheries at a few points on the lake.

Digitized by Google

At Milwaukee there are four steam-smacks, and two sailing-smacks engaged in fishing. These six smacks have a total of sixty-five miles of nets. Each smack takes an average of 400 pounds of fish each trip, during summer. During the month of October, 1874, each smack took from 18,000 to 20,000 pounds of fish, while in November they increased the take to 32,000 pounds each. The sailing-smacks took about the same number each trip, but they made less number of trips. The total of fish taken at Milwaukee during the season of 1874 was not far from 270 tons of dressed fish. Each steam-smack cost about $7,000. The capital invested at that place is not far from $75,000. In former days the fishermen used nets of a larger mesh and took white-fish that weighed from 8 to 14 pounds each, the latter figures being the largest known to have been caught. Now they have to use smaller-meshed nets and take smaller fish, the large ones being almost unknown.

At Racine there are employed four sailing-crafts, using a total of thirty miles of nets; each trip average about 400 pounds, making a trip every day unless interfered by storms. During October and November the trips were tripled. A large per cent. of the fish taken during the last half of October and November were trout, as the spawning-grounds of this fish are no great distance from this place. Tons of this magnificent fish were taken when filled with ripe spawn. There were taken about eighty tons at Racine during the fish season.

Kenosha employs four smacks, with about thirty miles of nets, and the catch is about equal to Racine.

In these places, Kenosh, Racine, and Milwaukee, there is a total of one hundred and twenty-five miles of gill-nets used. There is a total of nets used in the waters of Lake Michigan to extend from one end of the lake to the other.

During the year 1875, there has been great complaints of scarcity of fish, and there has been a falling off of at least one-fourth; so that it is evident to all that the waters of Lake Michigan are being gradually depleted of fish.

One of the Commissioners has been engaged a part of the last summer, in ascertaining by writing and correspondence, the depth, temperature, and nature of the bottom of several of the larger of our inland-lakes. The species of fish inhabiting these lakes have mostly been ascertained. These investigations were prosecuted with

Digitized by Google

a view of furnishing *data* by which we can tell what species of fish would be best to introduce in each individual lake. We would say, to a certainty, that all those deep, cold waters, where that small species of white-fish, known as the sisco, *(Argyrosomus sisco,)* is found, there the large lake-trout, *Salmo namaycush*, Penn., will thrive. It is the intention of the Commissioners to stock such lakes abundantly with these large, superior fish, so that the inhabitants can go with hook and line, and bag trout weighing from eight to forty pounds.

If all the lakes could be carefully surveyed, and every species of animal ascertained that inhabit the waters, or burrow in the bottom, it would be of the greatest interest to science, and of permanent value to the cultivation of fish. For, by these means, we would ascertain the supply or deficiency of those worms, crustacea, and small species of fish, which furnish food for several of our most valuable food-fishes.

The State of Indiana has undertaken this investigation in all of the lakes in the State, conducted by scientific men under the supervision of Professor Cox, State Geologist.

Can't this be done in Wisconsin?

The report of Professor Spencer F. Baird, United States Commissioner of Fisheries, for 1873–4, a volume of upwards 800 pages, contains full statistics of operations of the Government and of States provided with commissioners, in the matter of fish-breeding. The results are most gratifying, and future prospects are very encouraging. We have before us, also, the report of the commissioner of fisheries of Canada, for 1874, a volume of nearly 200 pages, which contains a complete statement of the Canadian fisheries. The money value of their fisheries for 1873 is given at $10,754,998; for 1874, at $11,681,886. The consumption for domestic supply is not embraced in these figures; for this, 10 per cent. should be added. In this exhibit, too, British Columbia, Manitoba, and the Northwest Territories are not included. The increase of nearly one million dollars, for 1874, was largely due to the process of artificial propagation, which our neighbors have been carrying on for several years past.

The question of attaching this branch of industry to our State University is worthy of consideration. The agricultural department could easily take it as a branch of that science, and in a few

Digitized by Google

years it would be found that the harvesting of the waters would amply compensate for the trouble, besides furnishing skilled labor which is in great demand. Four of the universities of Virginia have added fish-culture as a branch of university-education, and other States, no doubt, will soon follow her example. Wisconsin, in this matter, ought not to be behind her sister States.

When we consider how short a time fish-culture, as now practiced, has been known, and how completely ignorant the world was of even their manner of impregnating the ova, we can but wonder at its success. Though an art long hidden, it is not a difficult one, and its practice is simply the bringing of man's intelligence to assist blind nature. Naturally, the female fish discharges her spawn, and the male the milt, about the same time; if the spawn comes in contact with the milt, which only a small portion is likely to, it becomes impregnated, and the unfertilized not only spoils, but becomes a putrid mass, spoiling the fecundated eggs near them. Nearly all fish are spawn-eaters, and many eat their own spawn. Most all water-fowl are fond of spawn, and some ducks will dive several feet to obtain it. Perhaps the greatest destroyer of spawn in our lakes is the water-lizard; it is often found gorged with the eggs, and lives on them for months. Artificially, we do this thing better; we take the spawn of the female in a clean vessel, and spread over it the milt of the male. It is then put into a trough or box through which a gentle current of water flows, and nearly all are hatched, if intelligently done.

We feel justified, although to some an old story, in rehearsing some of its successes, and what manner of men and nations are patronizing it.

Fish-culture, as now practiced, with the exception of a few mere experiments, had its origin with the French nation, as they were the first to patronize and encourage it; although by the misfortune of war she lost her great breeding establishment at Huningen, she lost no time in establishing others on a more extended scale. In speaking of the importance of fish-culture, one of her ministers said in an address, "that this industry, properly encouraged, would keep her people from asking for meat as well as bread."

Although the breeding establishment at Huningen was lost to France, it was not lost to the world. Here we quote from an address delivered by George Shepherd Page. He says, "that up to

Digitized by Google

the season of 1864 there had been distributed from this establishment one hundred and ten millions fry, and yet it is carried on upon a still grander scale under the auspices af the Deutscher Fischerei Verein." This society is the fish-culturalists association of the German confederation, and among its most active members are Count Bismark, the Grand Duke, Our Fritz, Count Munster, and others, and through the agency of this society hundreds of rivers and lakes are once more teeming with the finny tribe.

We quote from Professor Baird's report. He says, "that the establishment at Nikolsky Rusva can fecundate yearly 5,000,000 white-fish, 2,000,000 trout-eggs, and 1,000,000 salmon eggs, besides furnishing 1,000,000 eggs to the trade. Up to the year 1868, this establishmont received a yearly subsidy of $21,000, but since that year it became the proporty of the Government, and is at present under the control of the Agricultural Department."

M. Bouchon Brandley, assisstant secretary of the College of France, in a report to the Minister of Public Works, says: "Before reviewing the establishment which I have visited, I must mention a fact selected from a large number. The inhabitants of the village of Vallorbe, near Jounge, about twenty years age, lived from the fisheries of the River Orbe; by exhausting this river which was rich in the salmon kind, without ever replenishing it, the fishers and their families were reduced to want, but their school-master, hearing of fish-culture, commenced experimenting; the villagers seeing that his experiments were successful, appropriated a few hundred francs to assist hin in his enterprise, and now the river swarms with fish, and according to the official report there are eighty families that live entirely off these fisheries."

The above shows what one person can do.

The statutes of Massachusetts have three hundred and fifty-nine acts for the protection of fish, but with all this protection the fish grew scarce until artificial hatching was commenced, in 1857, and in four years the fish were plentier than they had been in fifty years.

Since submitting our last report, we have received from the United States Fish Commissioner twenty-five thousand Atlantic salmon-spawn, but owing to bad packing, only hatched eighteen thousand, or 72 per cent. The young fry were put into Elkhart, Cedar, Rock, and Devil's Lake. We also received thirty-eight hundred and fifty

Digitized by Google

land-locked or sebac salmon, of which we hatched three thousand five hundred and thirty, or 91½ per cent. These we divided among the fish-breeders of the State, exacting of them a promise that should they be successful in breeding them, they would give the State the preference in the sale of their progeny. We thought by doing this that the State would get a start in them sooner than to trust so few in a lake. In this fish, we, in common with other fish commissioners, as well as fish-culturists, have a great deal of confidence. As a game and table fish, it is no way inferior to the sea-going salmon, and unlike it, is not an experiment in introducing them into our lakes, as their home is in the fresh-water lakes of the State of Main, that in no material respect differs from ours.

There is now a great demand in all the northern States for this fish to stock their lakes with. This, with the limited preparations heretofore for taking the spawn, has made them difficult to obtain, but as the United States Commisioners, as well as private individuals, are making preparations for taking larger quantities, we hope to be able, this year, to get enough to make an impression on one or more of our lakes. For those that are not posted, it might be well to say that this is the true salmon, that from some cause, has lost its instinct or desire to go to salt water, and this, together with the fact that they all spend a part of their lives in fresh water, encourages us to think that any of the salmon can live and grow in our fresh-water lakes.

We likewise have hopes in stocking our rivers with salmon and shad. Those put in the tributaries of the Mississippi would go to the Gulf of Mexico, as the streams would not likely suit them after the second year, but when nature moved them to propagate, they would return to the fresh, pure water, as they can breed in no other; and it is a fact well known to those who have studied their habits, that fish always return to deposit their spawn where they were hatched, or as near there as they can get. As to the distance, both shad and salmon are known to make longer journeys, but the experiment is in course of elucidation in a number of other States, as well as our own, and we do not propose to make further efforts in this direction until we know the result of those already made. So far, everything is encouraging, and the cost to Wisconsin has been very trifling.

The fish, native to our waters, is what the Commissioners wish

Digitized by Google

to turn their attention to at present. Among these are the white-fish, salmon-trout, lake herring, black-bass, and the brook-trout. The latter may be raised in our spring-bed lakes and such brooks as the owners will allow the people to fish in, during certain months, when fishing will not interfere with crops; but the trout should remain in abeyance to the others, as it is more valuable for sport than food.

The Commissioners feeling the importance of stocking the interior lakes, and wishing to lose no time after examination and inquiry of the fishermen on Lake Michigan, started a temporary hatching-house at Pensaukee, on the railroad, twenty-five miles above Green Bay.

A leading object with us in selecting this point was that there was an old mill-house that we could get the use of free of other charge, than trifling repairs, and a mill-pond to take hatching-water from, in easy reach of the fisheries.

We are sorry to say that in the procuring of the Mackinaw trout-spawn, we made a total failure. There were no ripe trout caught there this season. The fishermen seemed as much disappointed as we were, and Mr. Crumbough, a very intelligent gentleman, and who has been connected with the lake-fisheries for twenty-five years, said he was unable to account for it. We suppose they have changed their spawning-beds, and the fishermen did not know it. Neither have we taken as many white-fish spawn as we had hoped to; this probably is in part owing to our inexperience in the taking of this kind of spawn, but mainly to the early closing in of winter, which forced the fishermen to take up their nets in the midst of the spawning season of both the white-fish and herring. This partial failure suggests the importance elsewhere noticed, of having more locations for the taking and vitalizing of spawn. Spawn cannot be carried a distance until the embric is about half developed.

We append the statement of Mr. John Palmer, who has had charge of the taking of spawn, from which it will be seen, that in addition to the white-fish spawn, he has laken about two hundred thousand of the lake-herring spawn. This fish is known in Madison as white-fish, and Fourth Lake is very full of them, a few of them having been put in there by ex-Governor Farwell, who no doubt thought them to be white-fish, as many still do. While in flesh and size they are not quite the equal of the white-fish, they

Digitized by Google

are better for lakes where netting is not allowed, as they will take the hook, (and being very prolific, a large one having about 20,000 eggs,) and being superior to the fish native to our interior lakes, we think them well worth introducing.

In connection with the importance of re-stocking Lake Michigan, we reproduce an article that appeared in the Green Bay Advocate of November 25, and add that these are the views expressed to us not only by fishermen and fish-dealers, but by all conversant with this industry.

In the discharge of our duties, we believe we have had the good wishes of all, and certainly the kind assistance of many among whom we mention in an especial manner the Gardiner Company, of Pensaukee, Mr. Joseph Gevalle, a fisherman of Pensaukee, and Mr. N. K. Fairbank, of Chicago. The latter gentleman, at his own expense, has built, at Geneva Lake, under the advice of Seth Green, who personally superintended it, a hatching-house, and in addition to such spawn as the State has furnished him, he has purchased 250,000 of the spawn of the salmon-trout and brook-trout, and bears the whole expense of the labor of hatching. As this is a public lake and Mr. Fairbank's interest is only a summer's residence there, we think him entitled to far greater commendation than this bare mention.

If the legislature deems the stocking of the public waters of the State of sufficient importance to continue the breeding of fish, we would recommend an appropriation of fifteen thousand dollars. This amount would build a hatching-house, and ponds for the keeping of such breeding fish as are desirable, and will bear confinement, and two or three additional temporary establishments on Lake Michigan, to be used not only in stocking the interior lakes, but in re-stocking this great public farm. Our estimate is, that eight thousand dollars would make the necessary preparations for carrying on the business, and that seven thousand will be required each year to carry it on; and judging from the success of other States and nations, this amount spent annually for a few years, would not only stock the interior waters with such fish as they are adapted to, but stock Lakes Michigan and Superior so as to give employment to thousands of fisherman, and at the same time greatly cheapen fish to the people. In fact, the importance of these lakes to the State, as a source of food-supply, cannot well be exaggerated.

Digitized by Google

With them well stocked with fish, Wisconsin can never have a famine. The Chippewa Indians on Lake Superior have been known to live on white-fish alone for six months at a time.

It may be objected that other States would get the benefit of our fish. To this we would say that experience and observation have proved that neither the white-fish or trout are disposed to roam over large districts, and Michigan, the only State greatly interested, has made liberal appropriations for fish-culture, and no doubt will do her part in stocking these lakes.

The fact of their not being inclined to roam over the lake, makes it desirable to hatch at different localities, as we think it will be cheaper than to transport the fish, as well as making the obtaining of spawn more certain.

We append the article referred to, from the Green Bay Advocate, and commend it to the careful attention of the custodians of the people:

FISH-HATCHING.

"We presume that it is not generally known that the State has a fish-hatching house at Pensaukee, on the bay shore, twenty-three miles north of this city, but such is the fact. However, it is yet in its infancy. The legislature two years ago made a small appropriation for fish-culture, and appointed Messrs. Welch, Palmer, and Hoy as Fish Commissioners. The appropriation, as we understand, was very small—only $2,000—but there still remains an unexpended balance, which is being invested at Pensaukee, under the immediate charge of Mr. John Palmer, who is a son of Alfred Palmer the Commissioner. He is assisted by Wm. Petherick. Mr. Palmer, Sr., has also been here to see that everything was started right.

"The white-fish, trout, and herring in the waters of Wisconsin are becoming rapidly thinned out, occasioning no small degree of alarm among our fishermen, and well it may to us all. There is an immense sum of money invested in the fisheries here, and the fishing-interest is second only in importance to lumbering. Our fishermen, to save the money they have already invested and continue their business, are year by year making larger nets, striking down into deeper water, hoping thus to increase their gains, or at least enable them to make a fair living. Various devices have been resorted to by the State to prevent or delay the exhaustion of fish,

Digitized by Google

prominent among these are laws prescribing the minimum size of the meshes of gill-nets. These measures are right enough, but they are behind the times. The fact is well established that but an infinitely small proportion of the fish-spawn annually deposited in the lakes, bays, and rivers ever come to maturity. The eggs are mostly devoured by other fish. In the light of the experience of the present day, then, the true remedy is to hatch the eggs by artificial means, and place the young fish in the waters of the State. The process has long since passed beyond the limits of an experiment. Its success it a fixed fact. The streams of the east, that were depleted of shad, have been re-stocked, so that the present season the fisheries have been more remunerative than for many years before.

"Pensaukee has been selected as a location for one of the hatching-houses, for several reasons: There is an abundant supply of water in the Pensaukee River, and the dam is located so near the shore that the eggs may be taken there in a few minutes; the fisheries at Pensaukee offer abundant facilities for procuring eggs; and last, but not least, Mr. F. B. Gardner has a building suitably located, the use of which he offered to donate to the Commissioners.

"We visited the hatching-house on Friday last, in company with Mr. A. S. Coleman, of the Gardner House, Pensaukee, and Mr. Masterson, of Peshtigo. The room employed is the lower part of the old water-mill, about half a mile from the bay shore. They commenced operating here October 14, since which time the room has been fitted up, a flume built, tapping the dam more than a foot below low-water mark, and some four or five feet below the present height of the water; the necessary troughs have been put in, and 300,000 eggs secured. The mill is directly below the dam, and the flume enters at the side of the room. The flume consists of one box inside another, the space between being filled with sawdust to prevent freezing. Running at a right angle with the flume along the upper side of the room and connected with it is a long trough with waste-gate at the end. Beneath this are four hatching-troughs running crosswise of the room, with a faucet from the main water-trough over the upper end of each; thus the quantity of flow of the water may be regulated by the turning of the faucets. Each hatching-trough is nine feet long, perhaps two and a half or three feet wide, and five or six inches deep. They are rough, wooden

Digitized by Google

boxes, lined with zinc. These are divided into five equal compartments by partitions an inch and a half high, and also two smaller ones, one at each end. That at the upper end is where the water runs in from the faucet, and at the lower end is the waste-pipe. Under each faucet a sponge is placed, which catches the sediment from the water. The lower end of the trough is an inch lower than the upper end. The process of getting the eggs is as follows: Mr. Palmer goes out on the bay with the fishing-boats, taking with him some tin pans. When a female fish is taken containing "ripe" eggs, the fish is held by the gills with one hand, while the other hand is passed gently down the abdomen and the eggs run out into the pans. The eggs are then fructified by a similar operation with a male fish, producing a milky fluid. The eggs are then taken ashore and put in the hatching-troughs. They being heavier than the water, lie on the bottom, while a continuous stream of water flows over them. After they have lain there a few weeks, a minute black speck is seen in each egg. This is the embryo fish. After the lapse of about 100 days from the time of depositing the eggs, the fish, a mere speck, having absorbed the egg, has life and begins to shift for itself, lying in the water with its head constantly turned up stream. The eggs lie in the trough about 64 to the square inch, from which the total number may be determined with tolerable accuracy. Every day they are carefully stirred up with a feather, and any dead eggs that may be found, removed by a pair of pliers. The living eggs are almost transparent, while the dead ones turn white.

"It was Mr. Palmer's intention to put in some salmon-trout eggs, but in this he has failed. The trout caught in the bay this fall have been almost exclusively males, and it is evident that the females have gone to some other place to spawn. Up to the time of our visit he had secured 300,000 white-fish eggs and if possible will put in half a million or more. But three of the troughs are in use, and if possible he will put in a million herring-eggs in the fourth one. The first eggs have now been in the troughs about two weeks and are looking well. Mr. Palmer informs us that the fishermen generally, and Joseph Levaile in particular, have been very kind to him and assisted him in every possible way. The white-fish are generally done spawning by about the 20th of October, but many have been found that are not ready yet.

Digitized by Google

"As to the disposition of the fish when hatched, we are told that it is probable that when a few weeks old some of them will be put into the interior lakes of the State, such as the Madison lakes, Geneva Lake, and Green Lake, but the majority will be put into Green Bay. Another appropriation should be made by the State this winter, and should it be made with anything like the liberality that the importance of the subject demands, it is likely that permanent buildings will be erected at Pensaukee and the process of fish-hatching be carried on to a much larger extent. Meanwhile the Commissioners rely on the generosity of Mr. F. B. Gardner.

"We understand that Mr. Gardner intends, on his own responsibility, putting in one hatching-trough for brook-trout.

---

"*To the Fish Commissioners of the State of Wisconsin:*

"Having been sent by you to this place (Pensaukee) to build a hatching-house and get what lake-trout and whith-fish spawn I could obtain, I proceeded as follows: It was late in the season when I arrived here, October 14; had then everything necessary for the business to obtain and arrange it in shape to take spawn, which was finished on the 22d of October, but as yet the fishermen were taking no trout. I was then ordered by you to examine the different fisheries on the bay, which I did, and found that none of the fishermen were catching any trout on either shore. On inquiring, found that it was an uncommon occurence, as the fisherman claim good catches of trout during the spawning season in past years. The reason they assign for not taking the trout this year is, that they have changed their spawning-beds into very shallow or very deep water, where the nets are not set; this reason, I think, holds good, as the fishermen all had fair catches of trout from the 3d of November (too late to get spawn) until the season closed. On seeing that I could get no trout-spawn, I turned my attention to white-fish, and on November 2 made my first trip after their spawn, and found them not ready yet; on the 5th I got about 25,000 spawn and could have taken many more if the males had been in proportion to the females. The catch was about 300 white-fish besides the usual catch of herrings. The white-fish were nearly all females but a very few males; they ran in this way two or three days, and then it changed to males, with hardly an exception, which lasted

Digitized by Google

a few days; I got but very few spawn during this time. On the 11th and 12th the bay was so rough the fishermen did not go out to the nets; on the 13th I got about 100,000 spawn and lost all of them before I got ashore, on account of the rough weather. I then took them in small quantities until the 21st; the morning of the 22d the bay was frozen over.

"On making an estimate I found I had 350,000 white-fish spawn and 200,000 herring spawn, all in good condition.

"In closing I would say that the fishermen in general seem to take an interest in stocking the waters of the State with fish.

"JOHN PALMER.

"*PENSAUKEE, December, 1875.*"

---

*Names of the commissioners of the several States at present acting as such, so far as known.*

ALABAMA: Chas. S. G. Doster, R. Tyler, D. R. Hundley.

CALIFORNIA: S. R. Throckmorton, B. B. Redding, J. D. Farwell.

CONNECTICUT: Wm. M. Hudson, Robert G. Pike, James A. Bill.

IOWA: Samuel B. Evans, B. F. Shaw, C. A. Hains.

MAINE: E. M. Stillwell, Henry O. Stanley.

MARYLAND: T. B. Ferguson, Phillip W. Downs.

MASSACHUSETTS: Theodore Lyman, E. A. Brackett, Asa French.

MICHIGAN: George Clark, A. D. Kellogg, John J. Bagley.

MINNESOTA: Horace Austin, David Day, O. W. Latham.

NEW HAMPSHIRE: Oliver N. Noyes, John S. Wadleigh, A. C. Fifield.

NEW JERSEY: B. P. Howell, J. R. Shotwell, G. A. Anderson.

NEW YORK: Horatio Seymour, Geo. G. Cooper, Robert B. Roosevelt.

OHIO: John H. Klippart, John Hussey, E. Sterling.

PENNSYLVANIA: H. J. Reeder, Ben. L. Hewett, James Duffy.

RHODE ISLAND: John B. Barden, Newton Dexter, Alfred A. Reed, Jr.

VERMONT: E. C. Edmunds, M. Goldsmith.

VIRGINIA: Wm. B. Ball, Asa Wall.

WISCONSIN: Wm. Welch, Alfred Palmer, P. R. Hoy.

Digitized by Google

*Receipts and expenditures.*

| | | | |
|---|---|---|---|
| 1874. | | | |
| Dec. 31 | By balance of appropriation of $360, as per chapter 253, laws of 1874, and as per report of Commissioners of December, 1874, (error of 75 cents) | | $45 25 |
| | By appropriation, as per chapter 222, laws of 1875 | | 2,000 00 |
| | Total | | 2,045 25 |
| 1875. | | | |
| Apr. 3 | To cash | $45 25 | |
| May. 15 | To cash | 143 00 | |
| Aug. 19 | To cash | 75 00 | |
| Oct. 13 | To cash | 235 00 | |
| Nov. 26 | To cash | 200 00 | |
| | | | 698 25 |
| | Balance on hand | | 1,347 50 |

At the date of this report, we have not been able to ascertain the small balance of indebtedness incident to the hatching-house at Pensaukee, and the wages of the two men employed in doing the work at that place. That expense will be embraced in our future accounts. The Commissioners receive no salary, and make no charges for services beyond actual time employed, and the expenses of travel, stationery, and postage. The amount of charges in this particular is very trifling.

Digitized by Google

# Miscellaneous Papers.

## THE MINISTRY OF TOIL.

BY JENNIE M. FIELD, MADISON.

[Read before the Castalian Society of the University of Wisconsin, June 9, 1876.]

As I have wandered in the daily-deepening shadows of the woods in early June, almost able to see the leaves broadening in outline and the branches steadily lengthening as if a being imprisoned within were stretching its arms heavenward in mute appeal for release, I have thought—how nature works. Since the warm sun awoke from their winter of inaction the sleeping life forces in innumerable plants they have toiled incessantly, gathering food from earth and air, weaving for themselves garments of exquisite beauty, and not content with merely living, pressing forward into greater completeness ot life. These busy plant workers give to summer half its gladness. They are constantly at work, yet without hurry or worry, and the perfection of the finished product gives evidence of joyous doing.

As I have listened to the sweet twittering of birds over their spring-time building, watched the tireless flight of the bee as it hives summer's sweetness, or noted the quick movements of some provident squirrel in October woods, I have thought, labor can not be irksome to these little creatures; they seem to toil from very love of it. Again, as I have observed some merry and enterprising child-neighbors, engaged in their would-be-work, with guns improvised from the wood-pile, marching boldly to battle, or with miniature wheel-barrows,gathering loads of dry leaves and dead sticks, merely for the pleasure of transporting them, I have said to myself—surely it was intended that all should find pleasure in work.

To do something is the natural impulse of every healthy child.

Digitized by Google

All praise to the wise mother-love and ingenious mother-thought that shall so employ the busy little head and hands that the early impulse of the child shall grow into the settled purpose of the man.

While plants, under the stimulus of sunshine and moisture, gladly toil the whole summer through, and beast, bird, and insect, guided by instincts that never err, joyfully labor in self-support, can it be that to man alone, of all animate objects, labor is a curse, to all other living things a joy and a blessing?

There is no exception here. Work is a universal and beneficent law of life. It builds up everywhere. It is the condition of all growth, physical and spiritual. Is it seen to produce beauty and perfection in plant and animal life; so will it in human life, if the individual life-force is left as free and untrammeled in its operation. The demand for exercise, which finds its best satisfaction in useful labor, is as imperative as that for food. We must eat to live, but if we eat rationally we forget the necessity of the thing in the pleasure of it; so may it be with work.

Let us shake off the superstitious belief that labor is a curse, and cease to reproach our first parents as though, by reason of their sin, they had done us a personal injury in transmitting to us an inheritance of toil. Adam and Eve were put in the garden of Eden to dress and tend it; they were not to be idlers even there. They were sent forth in disgrace to be sure, but had they remained, who can suppose that among the innumerable heirs it would be our good fortune to retain the original homestead? Some of us in that fast-growing family must have been pioneers, and in any case we could scarce wish to look upon a fairer scene than lies spread out before the dwellers of our lake-encircled city. Coming out, then, from under the shadow of this old-time curse, let us consider the ministry of toil. And first of all, it is work that gives significance to life, our work that gives to the life of each one of us its meaning, and in proportion to the importance of the work and our adaptation to it, will be the fulness and completeness of our life. The what-for and the worth-while of life offer problems that puzzle many a philosophic idler, who, finding no solution, as of necessity from his position he cannot, grows bitter and cynical. But the humblest toiler, as he with dinner-pail in hand passes by in early morning, whist-



Digitized by Google

ling as he goes to his rough but honest toil, might give an answer to this problem of existence.

It is not fortune, position, or learning that makes life worth while; it is the doing of noble deeds, steadily, faithfully, not for selfish gain or applause, but that one's own life and the life of his fellows may be sweetened and uplifted. If life means little to anyone, it is because he is doing little. To the world's busy workers in all honorable fields it is full, pure and glad. It is work that gives meaning to cities as to individuals—indeed, it is their only justification. We should be foolish in the extreme to huddle together and deprive ourselves of air and sunlight, were it not that we can do more by combination. Work is then the source as well as the soil of the city. "The surrounding is born out of the doing."

While riding on the cars past some lonely farm-house, or lingering for a moment in some quiet village, especially a peculiarly western village, with its shanties clustered about the depot, have you never wondered how the dwellers in these secluded spots found life endurable, much more, enjoyable? And have you never caught yourself looking down upon such as chanced to stray near with a mingled feeling of pity and patronage which a survey of their contented faces did not in the least warrant? But if business or pleasure has called you to one of the least promising of these towns, and you have been welcomed to the home-life of some simple cottager, you must have found that the cares of the family and the interests of the community give significance to life here as elsewhere.

To no other class in society has life so little meaning as to young women of leisure. Reared in the narrow belief that labor is degrading, they sit down in idleness, grow morbid and are consumed with *ennui*, while devoted friends wonder that they are not supremely happy. That they are not is sufficient proof that freedom from care is not, as many suppose, the one thing essential to enjoyment. Many an active, high-spirited girl, for want of proper employment, grows into a sharp, discontented woman. Her native energy, turned to no useful purpose, reacts upon herself and blasts the life it was meant to bless. Happily the day is fast passing for woman, as it long ago passed for man, when idleness is respectable. A woman is no longer ostracized if it be whispered that she earns her daily bread.

Digitized by Google

There can be no question but that the homage paid to idlers in silks has bred innumerable paupers in rags; and pauperism will lift its head unblushingly and utter its loud and imperious demands until public opinion pronounces idleness, in rich or poor, in man or woman, a disgrace and a sin.

This utilitarian age insists that all shall be producers; if some are released from the direct labor of bread-winning, it is that by their intelligent oversight their neighbors may secure larger returns for their toil.

Persons of leisure are not necessarily a drain upon the workers. They are often the generous helpers of the people, and as such are deserving of all praise. The leisure class among us, unlike that in most countries, is composed almost entirely of women, the daughters of indulgent parents and wives of prosperous business-men. Relieved of the necessity of self-support, they are free to engage in the higher activity of work for others. Men of leisure have done much in science, art, literature, and social reform, women very little heretofore, but they are now awaking to their duty and their privilege; especially are they beginning "to put their shoulders to the lagging wheels of social revolution," and to them the future will look still more as leaders in acts of charity and reform. Woman's direct aid is a new factor in public motive power and as yet an undetermined quantity, but its value can not fail to prove considerable—though some still affect to see disaster threatening the homes if women once look beyond them. But as they are always the best workers who are something more, so they are invariably the best home-makers who are interested in the world's life. Narrowness is self-destructive. Even personal interest is best subserved by comprehensive aims.

Our daily work is a prop—we never know how great until through failing powers there come days of enforced idleness when we grow spiritless and despondent. It is a ladder by which we climb—remove it and we sink to the dead level of stupid inaction. "What a stay work is, the work that must be done." Its very inexorableness is its chief blessing; it will not allow us to give way to weak whims and caprices.

If work is not a prop, how shall we account for the suicides that so often follow disaster in business enterprises or trouble in domestic affairs? When one has labored long and zealously for an object

Digitized by Google

dear to his heart; when he has given the devotion of a lifetime to the accomplishment of a cherished purpose, and then defeat comes, sharp and crushing, he says in the extremity of his anguish, there is nothing more to live for; and so, before sober second thought has reversed this rash judgment and enabled him to adjust his relations to changed circumstances, he does that most cowardly thing —takes his own life.

We lean upon our work continually. A friend once told me after the death of a brother for whom she had been very ambitious, and to whom she had given not only the wealth of her love but the fruit of her toil, that it hardly seemed worth while to live now. Her chosen work with its years of willing sacrifice had seemingly come to naught—seemingly, I say—in reality no good work fails, and her tireless energies had not yet had time to seek out other needy ones for their loving ministry. Industry is a gracious comforter in sorrow. That was a true sentiment, uttered by an uncultivated woman, "There's nothing that chippers you up so as being real, driving busy."

The feeling of self-respect which work brings is by no means least among its blessings. The mastery of an honest trade gives a security greater than any wealth, because it is an interior possession. Industry is a life-preserver. The delicious sense of independence that accompanies genuine work is cheaply purchased even at the expense of aching limbs and weary brain. The youth with his first wages celebrates a perpetual independence day so long as those first-earned dollars last. Responsibility lifts the boy into a man; it accomplishes in days the ordinary growth of years.

Steady work gives stability to character and equilibrium to life. Idlers fall into temptation, speculators are unreliable, hangers-on for position uncertain. The discipline of regular work is an inestimable aid to virtue.

In the associations that cluster about our wonted work, we find some of the simplest and sweetest joys of life. The scenes of our work become endeared through long familiarity. Spots that have witnessed some hard-won battle, are ever after sacredly enshrined in memory, and we make pilgrimages to them with all the ardor of devoted Mohammedans journeying to their sacred city. It is always with regret that we move from the old home, humble, and lacking art it may be, yet glorified in our eyes, for within its walls has

Digitized by Google

been lived the intense life of youthful years. The sitting-room, that cosiest room in every house—unless we except the farm-house, where the airy, sunny kitchen claims precedence—owes its charm to the fact that the aims and interests of the whole family center there. Work is not excluded, as from the more pretentious parlor, but rather gives meaning and fitness to the place. Happy the family in which the home-life is so sweet and strong that it cannot be confined within the limits of one room, but overflows and fills the whole house.

Mrs. Whitney portrays with truth the natural impulse of one untutored in the ways of artificial life, when she makes a young girl to say in her admiration for a bake-shop: "Somebody came here to do something; the rest was, and happened, and grew. I hate things fixed up to be exquisite."

The friendships formed in the way of work, are those most fraught with pleasure and profit. Much of our social intercourse is stilted and formal, because it has no given basis. But with kindred aims and efforts directed to a common end, intercourse becomes easy, natural, and delightful. I have no doubt whatever that the husking- and quilting-bees of our grandmother's days, so happily combining work with play, were the delightful occasions they represent them to have been.

It is through our work that we are able to exert our greatest influence over others, and so to secure the inestimable blessing of living in other lives. As God treasures up his work in us, by making all nature minister to our needs, so we must treasure up our work in others, if we would have it abide. In our complex civilization, with its minute division of labor, we touch others at many points. This constant contact gives unlimited opportunity for helpful deeds, and increases our obligation a hundred fold; but if the responsibility is large, the compensation is ample, for by our entrance into other lives in helpful ministry we broaden immeasurably the horizen of our own.

We speak most effectively through our work, and speak to a larger audience than the most popular orator can hope to assemble within reach of the voice. The humblest toiler, the simple fruits of whose painstaking skill pass into other and distant hands, may be cheered with the thought that he is contributing to the world's

Digitized by Google

life; and certainly he needs this comforting reflection, for his pecuniary remuneration is likely to be meager enough.

Man, through his work, becomes a creator and thus secures the exalted pleasure that comes from the exercise of creative energy. Every finished product that leaves his hands is a fresh expression of his power, and, as such, an object of satisfaction.

Infinite permutations are possible with the materials fitted to our use and a joy akin to the divine joy, that well repays the severest struggle, comes into the heart of every original worker. The carpenter who has conscientiously wrought his thought and strength, a part of his very being, into the frame-work of a dwelling, that shall be used as a human home, has left a monument of his creative skill instinct with his own life. The author, who molds old truths into new forms and sends it forth with the added meaning his new view imparts, is exercising creative force, and finds a present reward in the joy of invention.

Work is indispensable to happiness, and happiness is the one thing all desire but very few obtain, because they seek it in every direction but the right one. It comes not save as the attendant of right living—of working with God—and it comes surely as such. Would you know the import of all the glad voices in nature, the gleeful twitter of birds, the thrify hum of bees, the babbling of running brooks, and the song that the wind is singing in the waving treetops? Would you know the reason of the baby's happy laugh and the secret of the school-boy's lively whistle? Seek an answer in the ceaseless activity that comes from fulness and exuberance of life, and which is both a necessity and a joy. Happiness is coy; it shrinks from those who follow in eager pursuit, but seeks and nestles in the bosom of those that quietly walk in the way of duty.

We have seen some of the blessings of toil, but as performed today it is by no means an unmixed good. They who come from their accustomed tasks with stiffened limbs, wearied nerves, and dizzy brains, too tired even to sleep, and in whose faces to-morrow's sun will reveal lines of care which the night's rest shall have but half-effaced, can know little joy in work. I make no plea for drudgery. I draw no rosy-hued picture of a tread-mill existence. Happily machinery is relieving us more and more of routine work, and procuring us freedom to engage in the highest activity of which we are capable. The old Greeks had the truth when they believed

Digitized by Google

the gods helped them. But in steam we have a greater than Hercules, and no fairy could bring tidings with the speed and accuracy of electricity. If you travel nature's way you will get many a free ride. Establish your work along celestial tracks and it will be accomplished by divine magic.

Work, to be a blessing in the fullest sense, must be good in itself, looking to a worthy end, something for which we are prepared, and then honestly done. It is not an ultimate thing; it looks to an end beyond itself—the improvement of human life—and can then only be a blessing in so far as it contributes to that end. All nefarious traffic and dishonorable speculation carry with them a curse, and cast a withering blight upon those who engage in them.

Work good in itself becomes an evil when excessive in amount. It is a lamentable fact that hundreds, even in our midst, are forced to put forth the severest effort merely to obtain a meager material existence. But the overwork demanded by poverty does not equal that granted to ambition. The laudable desire to do well is lost in the ignoble one to do better than somebody else. It is not legitimate work that wears out our business men; it is friction, the worry that comes from the ceaseless whirl and grind of our wild, disordered life; and all because we worship money, allow it to bring distinction, make this artificial thing the basis of social classification, foolishly establishing among us an arrogant aristocracy of wealth. The sudden crashes that so often in our day startle the business and social worlds are all due to high-pressure life. We dare not run our engines at their greatest speed, but we venture to put to the fullest test these human machines, yet destruction follows no more surely in one case than in the other. He is the wise man who keeps power in reserve, and guards his strength along every avenue of expression.

Much of our work is wearing and vexatious because we are not prepared for it. Through lack of special fitness, or oftener through want of patient and continuous discipline, we are deficient in the skill that makes labor easy and pleasant. He is not in his true place who, with proper exertion, finds his work too hard for him finds it sapping his strength and draining his vitality day by day. Neither is he in his true place, who with care and faithfulness, can not do good service in the line he has chosen. Parents should be warned of danger for their children when their lassons prove

Digitized by Google

too difficult for them, when with diligent studying they are beyond their comprehension. The best machinery, run out of gear, tears itself to pieces; so the brightest talent, misplaced and misdirected, destroys itself. He who is out of his place, though ignorantly or vainly mistaking his calling, can only work half-heartedly and so with no real success. It is only by giving oneself to his work with love for it and zeal in it that he can find the blessing it holds. Then, if we would excel in doing we must attain heights of being. A great deed is seldom done by one mighty effort; it results easily naturally from the accumulated force of years.

It is steady application that achieves. The Holland woman knitting as she goes to market, may be stolid in intellect, but she teaches a lesson in perseverance. Spasmodic efforts are futile. It requires so much force to overcome the inertia of illness that many sudden starts accomplish less than a little steady pulling.

We waste a great deal of force in our noisy methods of work. The forces of nature act with perfect stillness. Light, that greatest of inanimate workers, makes no sound as, coming from its far-distant source, it pours each day its shining flood upon us; and from all the trees through which the vitalizing sap is coursing its busy way to-day, there comes not the faintest murmur to give token of their ceaseless activity. As the peach receives sunshine and transforms it into sweetness, so we, working as quietly and persistently, should turn all culture into action.

We are surrounded on every side by the results of that mighty transforming power, human effort. Our houses and books and pictures and machines are but concrete expressions of that grand product of human toil, civilization—an abstraction difficult to define, because many-featured and complex-natured; indeed, needing no definition because itself speaking with myriad tongues through every avenue of sense. We rejoice in our American civilization as manifested in public and private works, and with something of the pride a little girl feels as, hiding her pricked fingers, she displays her first price of needle-work, we, the world's youngest workers, hiding our scars and bruises, and forgetting the struggles of a hundred years, now invite the world to examine our work and pronounce upon its merit. The verdict is sure to be favorable. Glorying in the civilization already attained, we can but wish for a higher; for that yet to be we are in a measure responsible. We

Digitized by Google

shall either be living spokes in the wheel of progress, or lifeless obstructions in the ascending and consequently difficult path. To work and to help others to work with increasing freedom and success will insure continuous progress. Living then, not to work, but working to live, in the highest sense, our lives will be ennobled, and we shall share in the honor and blessedness of that world-wide fraternity—the great brotherhood of toil.

---

## HINTS FOR ARRANGING FLOWERS.

MRS. H. M. LEWIS, MADISON.

No home can be made truly beautiful without flowers. No matter how elegant the rosewood furniture, the damask curtain, the rare picture, or costly statuary, if flowers are not there, to the person of truly refined taste, the eye wanders away dissatisfied, and longs for something more; let bouquets of flowers, pots of thrifty growing plants be interspersed among these elegancies, and home becomes the most beautiful and enjoyable spot upon earth. Yes, flowers, ye are always welcome, welcome in sickness or health, welcome in prosperity or adversity, welcome to the marriage-feast, or house of death, welcome to our cradle, to our altar, to our grave. The love for flowers is largely on the increase among our people. In time, we bid fair to rival the French or English in decorating our public and private houses with them. In New York and Washington, we already know, that upon a single grand wedding, dinner-party, or reception occasion, thousands of dollars are expended for flowers; floral wedding-bells are sometimes sold for two hundred dollars, and baskets of cut flowers for fifty dollars, about holiday times, when choice flowers are scarce. In the New York papers we read that the "lovely Miss S—— is dead; five carriage-loads of fragrant flowers followed her to the tomb." Twenty-five years ago a bouquet of flowers was rarely seen in winter, and in summer, only the common ones were cultivated. Now florists are reaching out to the gardens of the east and the prairies of the west, in fact to all parts of the world for rarities. To our horticultural societies we are largely indebted

Digitized by Google

for this increased education of our tastes. Let us increase this love for the beautiful, and fill our conservatories full, if we can afford it; if not we will have Sweet Peas, Mignonette, Violets, and Pansies, for they are the sweets of earth, and cost us nothing.

THE VASE.—In arranging flowers we will consider, first the vase. Bright colored vases are not as effective as white, brown, Swiss wood, silver or bronze; all will readily see, if the vase is green or blue, the color conflicts with the foliage in the bouquet; if pink or red, with the flowers. A bowl or broad open vase seems the most appropriate shape for roses. A tall, spreading vase, for gladiolas, ferns, tuberoses, etc.; flat glass dishes, or cups, for violets and early wild-flowers. "A flower lover will in time collect shapes and sizes to suit each group."

TIME FOR CUTTING FLOWERS.—If you wish your flowers to remain fresh a long time (and who does not), cut them early in the morning while the dew is still upon them; cut them with sharp scissors or knife, and remove unnecessary leaves; as soon as cut, drop them into a basket or tray. Do not touch them with the hands more than is necessary. In cutting roses, cut buds or half-blown ones; place them as soon as gathered in shallow tins or bowls in a dark cellar or cool place, until you wish to arrange them. They should be arranged two hours, at least, before wanted. A little water sprinkled finely over them sometimes improves fresh flowers, but rarely; it improves flowers beginning to decay. Flowers decay sooner when tied in clusters or bouquets than when arranged loosely. When ready for the table, place them in the vase, or dish, with cold soft water, add a few drops of ammonia, salt, camphor, or bits of charcoal; give plenty of fresh air, particularly at night. Some flowers, like the Archenia, Azalia, Rhododendron, have a way of dropping their petals just as they are most wanted. Florists let a drop of gum arabic fall into the center of the flower where it hardens at the base and fastens them tightly to the stigma. In cutting flowers, if you wish to avoid cutting unnecessary buds, cut the flower stem short, and tie with yarn to broom corn; put a little cotton between the stems and splint to preserve moisture.

ART OF ARRANGING BOUQUETS, BASKETS, ETC.—Assort your flowers according to size and color, and arrange them mentally. Before beginning, put the whole mind upon the work, and harmonize the colors perfectly, using green to separate the flowers. Do not

Digitized by Google

crowd them; let each flower show its individual beauty, and a fine effect can be produced with but comparatively few flowers. We often see bouquets where fine flowers are used extravagantly, that are not pleasing, because of the crowded appearance. "The art of arranging bouquets is very simple, if any one possesses a good eye for color, and has some idea of tasteful combination," Care should be taken to harmonize and blend the colors together, using white, neutral tints and green; nature says plenty of green. Each flower is beautiful in itself, but when you group sun-flowers and roses, pansies and marigolds, together the charm of each blossom is lost. We often see at our agricultural fairs, bouquets of this kind utterly devoid of beauty, that are literally packed with beautiful flowers. We long to see in their places something simple, like a handful of Nasturtiums, Pinks, or a single flower with its buds and leaves. In arranging flowers, avoid stiffness; let the bright fern or fresh fine grass, break forth now and then, and the delicate vine wander about in its pristine beauty.

In arranging hand bouquets, begin at the centre with roses or something rare and beautiful. "Always placing the brightest colors in the centre of your bouquet, and gradually decreasing the intensity of the tints as you approach the exterior;" mingle shades and colors, but do not put one where it can detract from another, for instance, crimson and scarlet, unless flowers are very scarce; but if obliged to use them together, put plenty of white and green between them. Blue and yellow will not satisfy the eye, unless brightened by red or pink; pink, pale blue, or light purple, harmonize well. The color and shape of the green is a valuable adjunct in making all symmetrical; that must also be carefully studied. The lace figured paper makes a fine finish for hand bouquets. In arranging baskets, begin at the outer edge. Drooping flowers and vines, and nearly all kinds of garden flowers, look well in baskets.

Bouquets for the dining-table are usually made rather low. The custom of making bouquets as high as the heads of the guests at the table, is happily passing away. The custom of putting a small fragrant bouquet of Rose-buds, Pansies, Heliotrope, Geranium-leaves, etc., in the napkin, is a charming one. Large rooms, with high ceilings, will admit of very high, showy bouquets. I once saw, against a very white wall, upon a corner bracket, a huge vase filled with broad, green leaves, long. drooping lilly or corn-leaves, sev-

Digitized by Google

eral ferns more than three feet long, a few plumes of grasses, one or two spikes of Holyhocks, Gladiolas, large Zinnias, and Dahlias, all cut with very long stems, that gave me great delight. The foliage, from a little distance, reminded one of the tropics. Bright, green, feathery ferns, and trailing vines, with a few bright flowers, are used in profusion in decorating our houses. Ferns were never in such demand as at the present time.

FLOWERS FOR THE SCHOOL-ROOM.—We do not half appreciate the importance of bringing flowers into our schools. They are, many times, to the mind what exercise is to the body; a bright bouquet, a mound of fresh, green moss from the woods, or a healthy, blooming plant, will refresh the tired mind of the student, and enable him to renew the tedious lesson with new life and willing heart; will give to the weary teachers (God bless them) rest and comfort. We will take a short extract from a note written by a model teacher to a lady who occasionally sent her a bouquet. "One bouquet you sent me last winter, will ever be fresh in my memory. There was nothing cheerful in the school-room, not even a map; the school was large; some very large pupils to get along with, and thinking I had such a large school, made it harder. I went into school one day greatly discouraged; your daughter came and gave me a bouquet. I knew not what to say or how to thank her. It awakened my better self; the tears would flow. A day never passed after that, that I did not try to say something cheerful to them." Who can say after reading this testimonial that flowers have no influence in the school-room?

A FLORAL SERVICE.—"There is, in Old Gate, London, a rector who has for years past preached an annual flower sermon to the school children of his own and surrounding districts, The whole of the children sat in the body of the church, which was tastefully hung with garlands of choice flowers, while the adults occupied the galleries." I can conceive of no service more inspiring or impressively beautiful than this one, where the modest violet from the wild wood mingles its perfume with that of the rare exotic, and the fragrance ascends as an offering to God in the highest; for truly "floral apostles" speak more loudly than man ever spoke, and point with unerring finger to God the Maker of heaven and earth, and to His wonderful works, and to the home eternal, where flowers never fade, and the perfume shall be "wafted upon angel's wings." Why

Digitized by Google

should not we have a yearly floral service. June, with its wealth of roses and flowers, or July, when the white water lily comes forth in its beauty and purity, would be suitable months. Each member of the congregation, and Sabbath School, should be called upon to do a part. Let this be the children's day if you please. Let us gather the poor from the alleys and street corners and open our pews ungrudgingly to them upon this glad day, that they may feel that religion, for one day in the year, is free to all. Each child can bring flowers, ferns, or green vines, and as they are given in, they can be woven into garlands, or placed upon mounds, or put into vases or baskets, with but little trouble. Might not this make a lasting impression for good upon the young mind, as the pastor directs the hearts of all to nature, and to Nature's God?

"Bring flowers to the shrine, where we kneel in prayer.
They are Nature's offering—their place is there!
They speak of hope to the fainting heart,
With a voice of promise they come and part;
They sleep in dust through the wintry hours;
They break forth in glory—bring flowers, bright flowers!"

---

## FLORICULTURE.

MRS. M. M. DAVIS, BARABOO.

I cannot hope in this little paper to give you much that is instructive, or even interesting. The subject is a hackneyed one; almost every periodical we take up in these modern times, contains something in regard to floriculture. "Window gardening," "House Flowers in Winter," "What Shall we Plant," etc., have become every day themes, and are we not exhorted in newspaper after newspaper to make our homes attractive, not only by cheerful looks and words, but by every device of ornamentation and embellishment? Less than fifty years ago, botany was considered a very suitable study for young ladies, and that it was so considered, was not complimentary to the young ladies or to science. There has, however, been a great advance since that period, and some of the greatest scholars of the present day are engaged in investigating the mysteries of plant-life. In our own country, the cultivation of plants

Digitized by Google

and flowers has only of late years received much attention. Within the last fifteen or twenty years much interest in floriculture has been shown by the masses of the people. Early in this period there was a preceptible awakening which has increased until the present time, and now we find almost everybody devoting more or less attention to their culture.

As I go back to the home of my childhood, among the mountains of Vermont, I remember but one home where there was any real pretension made to flower-culture, and what a bright, sunny spot is that in my child-life. It was the home of an old couple who had not much money 'tis true; they lived in a rickety old house, inelegant and uncomfortable in many ways, and they lacked a hundred little things necessary for their comfort and ease that many other homes possessed, yet they were contented and happy. In their only sunny window there was a trailing, coarse, rampant growth of petunias—the white and dull purplish red—old familiars of thirty years ago, from which the rose, lavender, violet, blotched and striped of to-day have sprung. Over their doors, vines were growing. In their little garden-patch, all the old-fashioned garden favorites were opening their blossoms to the sky. While memory serves to furnish pictures I shall not forget this one. They were as ignorant of botany as they were of any other science. But what cared I, that the old lady called her Lilacs "Lalocks," her Peonys "Pineys," and her Asters "China Oysters?" "A rose by any other name would smell as sweet."

The popular study of botany now means more than the learning of the Latin names of plants and the parts of plants, and the becoming familiar with the mythical sentiment and poetry of flowers. I think our greatest need, at present, is a more general dissemination of practical, useful knowledge of plants and flowers, and their culture, adapted to the wants of inexperienced amateurs.

Should I undertake to give you a list of those most suitable for common window-gardening for those who are not blessed with the luxury of a green-house, it would be a mere re-hash of the catalogues. Yet many catalogues go through with a list of green-house or window plants which are really no more fit for window-culture than the hickory tree or sunflower. The most careful beginner will make many mistakes, but in this, he will find no cause for discouragement. The most skilled has always something to learn.

Digitized by Google

We are obliged to resort to an infinity of ways to protect our house-plants from the influences of a rigid climate, and with some, this is an impossibility. A few hardy, well selected plants, either for the house or yard will give more enjoyment to the cultivator, than a large variety in a neglected condition, and it is astonishing how much at home they are with one who really feels an interest in their growth. Yet many house-mothers say, "It is too much trouble," "I have no time." I know that some things must be crowded out of the possibilities of accomplishment in every woman's case. Let us have a care that it is not the best things that we let go. If she would consider that upon her depends, in so great a degree, the cultivation in those about her of refined tastes, and the "lifting up of the life into something higher than the mere doing of life's drudgery," she would not exhaust all her strength upon those things which are perfectly absurd and useless for her to do. Yet women, over-worked women, who have no time for the cultivation of flowers, or to spend amid the marvels of nature, will patiently sit, hour after hour, stitching little calico patches together, and will continue to do so as long as agricultural fairs offer premiums for such work.

How much better to take a day's pic-nic in the woods, occasionally, with the children. These days, scattered along through the pleasant months, would demand but little time, and would lighten wonderfully the monotony of daily routine, and give a freshness to common pleasures that, because they *are* common, are undervalued. We need to be brought face to face with God in Nature. We become strengthened by it. It is profitable, as Byron says, to

> "Go abroad upon the paths of nature,
> And when its voices whisper,
> And its silent things are breathing the deep beauty of the world,
> Kneel at its altar."

I wish I might be able to show that the cultivation of flowers, so far from being too much trouble, will give more value for less work and expense, than anything which can be done or bought to improve the surroundings of a home. It is only because flowers are so plentiful that we forget, or fail to see that they are so surpassingly beautiful. It is strange that anybody can grudge the little cost or pains their culture requires. Winter-bound, as we are for more than half the year, it is something to have a bit of summer

Digitized by Google

gladness in our homes, and it is very pleasant to look upon these bright, fresh plants which greet us every morning with their opening leaves and fresh flowers, assuring us that we have not planted in vain. "After all, what is the real use of all your flowers?" many people say. Not the slightest use in the world to any one who could ask such a question. They seem to have a lesson, however, for some. Prof. Swing says: "I study the flowers of the field, and come home a tenderer father, and a better believer in God." And it is much that this "spirit of beauty" that pervades our work is not left without a witness in the hearts of those with whom we dwell.

---

## CRANBERRY-CULTURE.

H. FLOYD, BERLIN.

Cranberry-culture is receiving some attention in this State, but not near what it should or will receive as soon as we become convinced of its practicability and profit. Up to the present time, a large share of the efforts to reclaim and plant marshes with the cranberry-vine, have been largely experimental, and many of these experiments have proved failures, in whole or in part. The causes of these failures are various. Some have planted in grass, which was not kept down; others have planted in marshes of no depth, with no supply of water to keep them wet, and hence have failed of the wished for or expected results; while others have planted in marshes not adapted to the growth of the plant, or on such as are flowed with lime-water, or are so much occupied with other plants as to choke out the cranberry-vine after it had been planted.

The great enemy of the cranberry is sage, a plant common to all marshes naturally adapted to cranberry-culture. This plant increases rapidly, under favorable circumstances, by sending out stolens when the marsh is dry and in proper condition for the rapid growth of the cranberry-vine. Hence, all lands which are to be planted with the cranberry should be cleared from sage, and nearly so from grass or other plants, especially the small brake or fern that sometimes infest these marshes.

Digitized by Google

All intelligent cultivators agree as to the importance of scalping marshes that are to be planted to vines. This work is cheaply and speedily done, with a machine which I have invented, if the marsh is firm enough to bear horses by clogging their feet. This machine can be gauged so as to cut from two to ten inches in depth, and from thirty to thirty-four or five inches in width, and with four good horses will scalp five acres per day. These turf scalpings may be turned over, or rolled up, then dried and burned or drawn off in winter to the compost heap. If they are to be burned, the scalping should be done early enough to have the full benefit of any dry time that may follow. When a clean surface has been secured in any way, the vines may be planted. The best mode of planting I have yet discovered, is to cut into the bog with an adze. A spade-blade, shaped to the proper angle and handled, would I think be a good tool to make the cuts with. With either of these tools make a slanting cut, leaving the slice so that it can be raised with one hand and with the other, slide the bunch of vines under and spread them the width of the cut; press down with the foot and the work of planting is done. Vines so planted often push out runners a foot or more in length the first year and look as though they would soon cover the ground, even though planted three feet apart.

It is not absolutely necessary to have these plants flowed until the third winter, unless insects should make their appearance, working or feeding on the vines. In this case the land should be flowed up to the last of May or first of June. This will prevent the first brood hatching in any considerable number. This first brood of insects makes its appearance about the middle of May, feeds on sage or vines not covered with water, and grows to maturity, ties itself up in its cocoon and passes the chrysalis state. The last of July or first of August, it often appears in vast numbers, devouring sage and cranberry-plants to such an extent as to almost destroy the entire crop of fruit. But if the marshes and plants can be completely covered with water, it will be impossible for the cranberry insect to become very numerous and destructive, unless adjoining marshes are made nurseries for its propagation, and the millers fly from one to the other. The insect deposits its eggs as freely on sage-plants as on the cranberry, and the young worms feed and grow as fast on one as on the other, hence all natural marshes are quite sure to be stocked with them to some extent.



Digitized by Google

The question of how the grower can secure an abundance of water, then, is a very important one, since with it, he can protect his vines in the winter (snow is nearly as good if we have it, but is not as reliable), and is also a protection against the ravages of the insect, and a preventive of blight of the bloom or sunscald, which is occasioned by excessive evaporation from the plants during the hottest hours of the day. Hence, when the water is drawn off the last of May, it should not all be drawn from the surface, but a little should be left to supply the plants with moisture and to tone down the air at the surface of the marsh by evaporation, until after the fruit is set, then it may gradually be drawn to the bottom of the ditches by picking-time.

Ditching has two objects in view; to drain the marsh when too wet, and to supply it with water. The drainage ditches should run at right angles with the descent in the marsh, except the main ones. The excavations of the former should be thrown into slight dams to hold water on the higher portions of the marsh in the earlier part of the season; then by damming the main ditches at proper points, we can hold the water, if we have a supply, at any desired heighth. The overseer of bearing marshes should have accurate knowledge of the stage of water after it is drawn nearly to the surface of the marsh until after the crop of fruit is set, since very heavy and severe losses have occurred, and will occur, if this is neglected; also after this time, in case of freshets, care should be taken to prevent an overflow.

HARVESTING.—Harvesting in this locality commences about the twentieth of September. The best method I know of is the one used by V. C. Mason, of Berlin, manager of Mason & Co's. marsh. He has all of his pickers engaged and booked before he begins picking. He employs a superintendent, who is over all, and is held responsible for the conduct of the employees. He also employs a boss for each thirty pickers, whose business is to take charge of his particular squad, and take them to such locality as the superintendent may direct and set them at work; see that they pick clean, and keep orderly and quiet; also to keep an accurate account of their daily, individual harvest. Each picker is furnished with a bushel box to pick in. This box is made as follows: The two ends are inch boards one foot wide; on the sides and one end of these are nailed, two to three inch by half inch slats, nearly three-eighths of

Digitized by Google

an inch apart, and to secure more firmly, each end is bound with hoop-iron; inch cleats are nailed on the outside of each end to prevent splitting and serve as handles to lift the box with. He begins the harvest with a small force at first, and increases it from day to day as he needs. He first picks strips where he wishes to run the main lines of his railroad, and then the track is laid on these strips. The track is made of two by six or eight inch pine scantling, notched at the ends so as to halve on each other; inch boards are nailed to the bottom of the scantling, covering one-half of the space between the rails and serve as ties. This track can easily be taken up or laid down in sections. All is gathered up at close of picking and housed or piled outside.

HANDLING FRUIT.—The rule holds as good with cranberries as with any other varieties of fruit. The least possible and the more careful the handling the better. The slatted bushel-box if used all the way through serves most admirably in this respect. When they are filled with berries they are set back by the boss and credit given for picking. They are finally gathered up by car men, and taken by rail, on small platform cars, to the store-house by the marsh, and from thence by wagon to their store-house in Berlin.

CURING.—To get the crop to market in good condition is of great importance to the grower. After getting a fine crop of berries, many have suffered in not having sufficient storage and have piled up the berries in such large quantities as to cause the fruit to sweat and heat so as to destroy the enamel on the surface of the berry, after which more or less of them will commence to rot, and hence cannot be in fine condition when in market. An improvement on this plan is to store them in shallow bins, arranged one above the other, slanting backward and so arranged as to be drawn out from all the bins. But I regard the bushel slatted-box, before described, as far the best way to store. Fruit in this box can't heat or sweat, and the boxes can be piled up like bricks, putting slats on every tier; so that the air can circulate freely among them and cure the fruit perfectly.

A word to growers and cultivators in regard to the varieties. On examination of most any marsh which is stocked with vines, we find a number of distinct varieties of fruit, differing in size, shape, season and in solidity. The best berry is one that has a good form, is early in its season of ripening, solid and meaty, and

Digitized by Google

a prolific bearer. The young grower especially may derive benefit by starting plats of vines, from selections of the best varieties that he can find. I hope we may, ere long, discover some variety, which will excel all our common kinds. The present knowledge of the science of cranberry-culture as practiced by the best growers in the northwest, is very limited, but will continually improve. We need to cultivate a habit of close observation and study, so as to guard against losses and failure.

---

## THE SIBERIAN APPLE—ITS USES IN THE POMOLOGY OF THE NORTHWEST.

J. C. PLUMB, MILTON.

The infusion of the Siberian element into our common apple is an event of great import, and one that we do well to consider in its widest bearings on our future pomology. When we take into account the fact that only about one-third of the area of our State dare plant anything but "Crabs," and at present only the four southern tier of counties feel safe in planting our general list of apples recommended as "hardy," it becomes a matter of grave importance that we, by any and all means, secure a race of apples that will extend this area of success to its farthest limits, even to the remotest corner of our State; and, especially, to supply the great agricultural and timber regions of central Wisconsin with safe and sure apples.

Our present race of choice apples proves quite satisfactory for the southern portion of the State, but in view of the destitution of so great a part of our commonwealth, we should explore every avenue promising improvement in the direction of adaptation. The entire effort of pomologists for the last century, both in this country as well as in Europe, has been in the direction of *quality* of fruit. These efforts have been a success, for better apples could not be desired. But the process of refinement of fruit has also been one of weakening of physical structure, and we of the northwest must go back to first principles, and infuse the northern element into our fruit-trees, as we have done in our people. In our pomology we

Digitized by Google

are restricted to comparatively few of the hardiest varieties for general culture south of the forty-second parallel, while above that, the case seems yet hopeless for any considerable number of our common apples to flourish. This leaves the great northwest fruitless, so far as home-production of the apple is concerned. This experience has been burned into us by great and severe losses of trees, both to the nurseryman and farmer. But with the advent of the Siberian family comes hope. Its special qualities of vigor and hardiness, early maturity of wood, and early fruiting, give it especial value in its purity, or as a fertilizer in the production of hybrids. It is especially valuable in this respect for its concentrated character, firmness of wood. and rich juices.

ORIGIN.—Of the origin of this species we have no very positive knowledge, but while the *Pyrus Malus*, or common apple, came from southern Europe or western Asia, the *P. baccato*, or Siberian family evidently had a northern origin. The evidence of this is more internal than historical. Our best historians cannot trace the improved apple to its transition from the native crab of Europe or Asia, nor the Siberian family, as we know it; showing that the amelioration of a species from its native wildness may be, not so much a gradual change, as a sudden impulse or "sport," which breaks over all previous rules of transmission. However this may be, we now find this species a most valuable adjunct, not alone from its inherent concentration of power, but from its possessing so many good points in its general make-up.

IMPROVEMENT AND PROGRESS.—Whatever may have been the origin of the Siberian family as we know it, we find it especially adapted to our purpose as an improver of species, being a strong impregnator of the qualities before named, giving a concentration of good qualities beyond any other available source. The progress of improvement has been hitherto very slow and uncertain, as if by accident. Our quick summers and warm autumns have exerted a genial influence, apparent in the improved quality of the old varieties as grown in the west, but under the process of hybridization does the special value of this species appear. This process has, we think, been used back-handed (*i. e.* from female to male), looking to the product of Siberian seeds for the improved variety. The chances for improvement this way are almost nothing, as the early bloom of the Siberian family secures self-impregnation before the

Digitized by Google

flower of the common apple appears. Reverse this process, and we have the chances largely in favor of securing impregnation of the common apple from the more advanced pollen of the Siberian that is grown or brought in proximity to it. Therefore, instead of planting crab-seeds, plant from the most desirable apples grown near the Siberian, and look for improved quality in the product. We do not propose here to discuss the many intricate theories of "improvement of the species," but refer to this one point as essential in this line of improvement. This subject opens an interesting field of experiment to the careful student of "art in nature."

LAKE WINTER SIBERIAN.

Fruit medium to large size; round, very smooth; pale yellow, mostly covered with bright blush or stripes; stem slender; cavity small; calyx closed, in shallow basin; core and seeds small; flesh fine grained, firm, juicy, sub-acid, becoming nearly sweet in spring; entirely free from astringency or "crab-taste;" excellent cooking or eating, from October to March, keeping well through winter. It is a beautiful, free grower, resembling the Fall Stripe or Saxton, of which it is a seedling, fertilized from the old large, red crab, grown from seed planted about 1855, in Jefferson county, Wisconsin, from fruit grown by J. C. Plumb.

Digitized by Google

With the advent of the Transcendent and Hislop came the hope of still further improvement in that direction, to meet the demand for all seasons and flavors. This increasing demand has stimulated every enterprising member of our profession to active search for something new in this line, and large numbers of new varieties have been brought to notice. Previous to 1868, none of our standard authors gave this family more than a passing notice, as "for ornament and preserves." In this year Dr. C. Andrews brought his "Marengos" prominently before the public, and gave an impetus to this new feature of fruit-growing. Since, yearly additions have been made to the list by various persons, each claiming merit, and onward progress has been made until all the old favorites have been discarded except the Transcendent which still stands as a test of quality for cooking. The Brier Sweet and Sylvan Sweet are the first pure sweet sorts, of good size and texture, brought out, and they well meet the universal demand for this class, but we need still, the pure sweet hybrids that will go with our sub acid and tart varieties through autumn and winter.

Among the most promising new varieties are those brought out by Mr. Peffer and Mr. Putnam, of our State, and some very promising ones from Minnesota. We need not enumerate the many very worthy varieties known in the west, for at the present rate of improvement the favorites of to-day may be displaced next year by the close scrutiny of the public taste and professional interest of growers. Our own careful observations of over two hundred varieties brought to notice as "worthy," concludes that not over one in ten can hold a place in general esteem. Of our own favorites the "Lake Winter" holds the first place. (See description herewith.) Our "Milton," now, after twenty years fruiting, and four years in nursery, promises to supersede the Transcendent in nursery and orchard. The latter is our standard of quality for its season and use, but has its weak points in its irregular growth and tendency to blight on rich lands. We shall not stop short of a complete list for all seasons, from early autumn to late spring in their ripening; of every grade of quality, from pure sweet to rich tart for eating or cooking, with rich, firm flesh, juice free from any astringency or unpleasantness. The trees should bear young and freely, and have early maturing wood; be free, smooth growers, and not subject to blight. All these qualities should be found in our favorite

Digitized by Google

Siberian Hybrids. Large size is desirable, also high color, but these qualities are not so essential as those before named.

USES—The manufacturers of jelly tell us that the native crab is superior to all others for that purpose, and the Transcendent next. All know how refreshing and healthful is good acid fruit in the spring time, and none is more easily grown and kept than our best winter Siberians. The very sweet and sub-acid varieties will give a combination to suit any taste without the addition of sugar. The consumption of fruit, in general, is limited only by the supply; price is only a nominal consideration. Twenty-five per cent. reduction in price will generally increase the consumption one hundred per cent. if there is a supply, and the better class of Siberians are no exception to this rule, bringing equal or better prices in all our markets with the best of apples. But these are only secondary considerations in the question before us. The immense extension of the area of successful apple-growing is the main point of this paper. The use of Siberians and Hybrids promise much, and is working grandly for this end.

I believe in "home-grown fruits" for every land and clime where it is fit that man should dwell, and I confidently predict that though this injection of the Siberian "blood" the area of apple-growing will be extended from two hundred to five hundred miles further north, and from the great lakes to Alaska's range.

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

UNIVERSITY OF MICHIGAN
3 9015 06701 5118

Digitized by Google

Digitized by Google